UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Stephen G. Burns, Chairman
Kristine L. Svinicki
William C. Ostendorff
Jeff Baran

In the Matter of NUCLEAR INNOVATION NORTH AMERICA, LLC (South Texas Project Units 3 and 4)	Docket Nos. 52-012-COL 52-013-COL

CLI-15-07

MEMORANDUM AND ORDER

The Sustainable Energy and Economic Development Coalition, the South Texas Association for Responsible Energy, Public Citizen, and Susan Dancer (together, Intervenors) seek review of the Atomic Safety and Licensing Board's third partial initial decision in this combined license proceeding.[1] The Board resolved Intervenors' Contention FC-1 in favor of the applicant, Nuclear Innovation North America, LLC (NINA) and held that NINA is not subject to impermissible foreign ownership, control, or domination. We find that Intervenors have not met the standards for review, and we accordingly deny review.

I. BACKGROUND

A. Prohibitions on Foreign Ownership, Control, or Domination

Section 103d. of the Atomic Energy Act of 1954, as amended (AEA), prohibits the NRC from issuing a utilization or production facility license to any "alien or any corporation or other

[1] LBP-14-3, 79 NRC 267 (2014).

entity if the Commission knows or has reason to believe it is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government."[2] The NRC regulation implementing this provision, 10 C.F.R. § 50.38, provides:

> Any person who is a citizen, national, or agent of a foreign country, or any corporation, or other entity which the Commission knows or has reason to believe is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government, shall be ineligible to apply for and obtain a license.[3]

The Staff has also developed a Standard Review Plan on foreign ownership and control issues, which the Commission approved in 1999, for use in its review of reactor license applications and license transfer applications.[4] The Standard Review Plan provides that "the foreign control determination is to be made with an orientation toward the common defense and security."[5] It also states that while "exertion of control over the 'safety and security aspects' of reactor operations . . . can be an important factor in the foreign ownership or control analysis . . . it may not be the only important factor."[6]

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[2] Atomic Energy Act of 1954, § 103d., 42 U.S.C. § 2133(d). A parallel provision, Section 104d., imposes the same restriction on licenses for medical therapy and research and development facilities. *Id.* § 2134(d).

[3] 10 C.F.R. § 50.38.

[4] Ex. NRC000106, "Final Standard Review Plan on Foreign Ownership, Control, or Domination," 64 Fed. Reg. 52,355 (Sept. 28, 1999) (Standard Review Plan). In the Staff Requirements Memorandum (SRM) on SECY-12-0168, the Commission directed the Staff to "provide a fresh assessment on issues relating to foreign ownership including recommendations on any proposed modifications to guidance or practice on foreign ownership, domination, or control that may be warranted." Staff Requirements-SECY-12-0168—Calvert Cliffs 3 Nuclear Project, LLC & UniStar Nuclear Operating Services, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), Docket No. 52-016-COL, Petition for Review of LBP-12-19 (Mar. 11, 2013) (ML13070A150), at 1. The Commission is currently considering the Staff's fresh assessment, which is found in SECY-14-0089. As the hearing below was conducted under the existing Standard Review Plan and our decision is limited to the specific facts of this case, we are not committing ourselves to any outcome with respect to the Staff's fresh assessment.

[5] *Id.* at 52,357.

[6] *Id.*

Intervenors claim that a foreign, minority owner of NINA has effectively taken control of the project because it has loaned NINA the funds necessary to complete the final stages of licensing (but not construction) for the proposed South Texas Project, Units 3 and 4. In LBP-14-3, the Board concluded that NINA had demonstrated that these loans do not give the minority partner, Toshiba America Nuclear Energy Corporation (TANE), improper control over NINA.[7]

B. License Application Revisions and Contention FC-1

Intervenors first proposed Contention FC-1 in 2011.[8] The third partial initial decision in this adjudication, LBP-14-3, resolved Contention FC-1, its last active contention.[9] Because the Board's decision fully describes the complicated circumstances leading to the evidentiary hearing on Contention FC-1, we need only briefly summarize them here.[10]

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[7] LBP-14-3, 79 NRC at 272.

[8] *See Intervenors' Motion for Leave to File a New Contention Based on Prohibitions Against Foreign Control* (May 16, 2011) (Motion for New Contention).

[9] Two other contentions were resolved in favor of the Staff and NINA following evidentiary hearings. *See* LBP-11-38, 74 NRC 817 (2011) (First Partial Initial Decision); LBP-12-5, 75 NRC 227 (2012) (Second Partial Initial Decision). A proposed "waste confidence" contention was dismissed pursuant to our direction in CLI-14-8, 80 NRC 71 (2014). *See* LBP-14-14, 80 NRC 144 (2014). Subsequently, the Sustainable Energy and Economic Development Coalition joined in two petitions, filed in multiple dockets, relating to the continued storage of spent fuel. *See Petition to Suspend Final Decisions in All Pending Reactor Licensing Proceedings Pending Issuance of Waste Confidence Safety Findings* (Sept. 29, 2014); *Petition to Supplement Reactor-Specific Environmental Impact Statements to Incorporate by Reference the Generic Environmental Impact Statement for Continued Spent Fuel Storage* (Jan. 28, 2015); *see also Petitioners' Motion for Leave to File a New Contention Concerning the Absence of Required Waste Confidence Safety Findings in the Licensing Proceeding at South Texas Project Units 3 & 4 Nuclear Power Plant* (Sept. 29, 2014); *Motion to Reopen the Record for South Texas Project 3 & 4 Nuclear Power Plant* (Sept. 29, 2014). We recently addressed the "Waste Confidence Safety Findings" filings. *DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-15-4, 81 NRC __ (Feb. 26, 2015) (slip op.). The "Petition to Supplement the Reactor-Specific Environmental Impact Statements" is pending before us and will be resolved separately.

[10] *See* LBP-14-3, 79 NRC at 272-76.

In 2007, NINA's predecessor, South Texas Project Nuclear Operating Company (STPNOC), applied for a combined license to build and operate South Texas Project Units 3 and 4 on the Matagorda County, Texas site where South Texas Project Units 1 and 2 are currently operating.[11] NINA replaced STPNOC as the lead applicant for the project in January 2011.[12] The license application now contemplates that NINA will construct and, indirectly through its subsidiaries, own a 92.375% interest in each of the two proposed units, while STPNOC will be the operator.[13] NRG Energy, Inc. (NRG Energy), a U.S. corporation, owns ninety percent of NINA through its wholly-owned subsidiary, Texas Genco Holdings, Inc., another U.S. corporation.[14] The remaining ten percent of NINA is owned, ultimately, by the Japanese Toshiba Corporation (Toshiba), through its subsidiary TANE, a U.S. corporation.[15]

After the accident at Fukushima Dai-ichi in March 2011, NRG Energy announced that it would no longer finance NINA's efforts to license and build South Texas Project Units 3 and 4

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[11] "STPNOC is a Texas nonprofit corporation and is controlled by a board of four directors. Three of the four directors are appointed by the City of Austin, CPS Energy, and NRG South Texas LP, an indirect wholly owned subsidiary of NRG Energy, Inc." *See* Ex. NRCR00101, *Prefiled Direct Testimony of Anneliese Simmons on Contention FC-1* (July 1, 2013), at 14 (Staff Direct Testimony).

[12] *See* Order (Revising Case Caption) (Feb. 7, 2011) (unpublished). STPNOC remains an applicant.

[13] NINA is the sole parent company of NINA Investments Holdings LLC, which is in turn the parent company of NINA 3 Texas 3, LLC and NINA Texas 4, LLC. NINA Texas 3, LLC will own 92.375% of South Texas Project Unit 3, and NINA Texas 4, LLC will own 92.375% of South Texas Project Unit 4. The remaining 7.625% of each reactor is to be owned by CPS Energy, a Texas municipal utility, which has no stake in NINA itself. *See* Ex. STP000036, *Direct Testimony of Applicant Witness Mark A. McBurnett Regarding Contention FC-1* (July 1, 2013), at 15-17 (McBurnett Direct Testimony).

[14] *Id.* at 17.

[15] Toshiba is the parent of the U.S. corporation, Toshiba America, Inc., which is the parent of TANE. The Board adopted the phrase "Toshiba, through TANE" to clarify that the actual issue before it was whether the foreign parent, Toshiba, is exerting control over NINA through its U.S. subsidiary, TANE. *See* LBP-14-3, 79 NRC at 271 n.3. We adopt the Board's nomenclature here.

and that it would write down its investment in NINA.[16] According to an NRG Energy press release, NINA would focus its efforts on obtaining the combined license from the NRC and a loan guarantee from the U.S. Department of Energy for construction costs.[17] TANE would fund ongoing costs to continue the licensing process.[18] Since 2011, NINA's sole source of funds has been a $20 million capital contribution from NRG Energy and loans from TANE.[19]

In response to NRG Energy's announcement, Intervenors proposed a new contention in which they argued that the application violated AEA § 103d.[20] Intervenors argued that Toshiba, through TANE, controlled NINA because it was, at that point, the only "contributing" member of the joint venture and the combined license application would allow TANE to increase its ownership interests in proportion to its financial contributions.[21] The NRC Staff did not oppose admission of the contention, and it requested information on the issue of foreign control from the applicant.[22] The Board admitted the contention as follows:

> Contention FC-1: Applicant, [NINA], has not demonstrated that its STP Units 3 and 4 joint venture with Toshiba, is not owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government contrary to 42 U.S.C. § 2133(d) and 10 C.F.R § 50.38.[23]

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[16] Ex. STP000078, NRG Press Release, "NRG Energy, Inc. Provides Greater Clarity on the South Texas Nuclear Development Project (STP 3&4)" (Apr. 19, 2011).

[17] *Id*.

[18] *Id.*

[19] Ex. STP000036, McBurnett Direct Testimony, at 10-11.

[20] *See* Motion for New Contention.

[21] *Id*. at 5-6.

[22] *NRC Staff's Answer to Intervenors' Motion for Leave to File a New Contention Based on Prohibitions Against Foreign Control* (June 10, 2011); *NRC Staff's Brief on Applicant's Filing Related to the Foreign Control Contention* (July 29, 2011); *see also* E-mail from Joseph, Stacy, Project Manager, Office of New Reactors, NRC, to Richard Sheide, STPNOC (July 19, 2011), attaching Joseph, Stacy, letter to Scott Head, Manager, Regulatory Affairs, Nuclear Innovation North America, LLC (July 13, 2011), attaching in turn Request for Additional Information No. 5856 Rev. 5 (ML11203A211).

[23] LBP-11-25, 74 NRC 380 (2011).

Between 2011 and 2013, NINA attempted to resolve the Staff's concerns about potential foreign control. In response to several Staff requests for additional information, NINA adopted a Negation Action Plan designed to limit TANE's control over the South Texas Project 3 and 4 joint venture.[24] In December 2011, the Staff notified NINA that its first Negation Action Plan was insufficient to negate foreign control.[25] NINA revised the Negation Action Plan several more times.[26] In its ninth revision to its application, NINA included commitments in its Negation Action Plan to ensure at least 50% of the construction funding would be U.S. sourced.[27] NINA also revised its application to ensure that TANE's ownership share of NINA would not exceed its current ten percent without the NRC's prior approval.[28]

None of NINA's proposed measures, however, resolved the Staff's concerns. In April 2013, the Staff issued a second formal determination, informing NINA that the ninth combined license application revision was insufficient to negate TANE's control and domination of NINA.[29]

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[24] The Standard Review Plan provides that a Negation Action Plan may effectively negate control. *See* Ex. NRC000106, Standard Review Plan, § 4.4, 64 Fed. Reg. at 52,359. NINA's first proposed Negation Action Plan is in appendix 1D to its application. *See* Ex. STP000045, "South Texas Project Units 3 & 4 Combined License Application, Rev. 6," (Aug. 30, 2011) (COL Application Rev. 6).

[25] *See* Ex. NRC000118, Matthews, David, Director, Division of New Reactor Licensing, NRC, letter to Mark McBurnett, Vice President, Regulatory Affairs, NINA (Dec. 13, 2011), at 1.

[26] Relevant portions of NINA's application revisions including the proposed Negation Action Plans (as appendix 1D) are in the record as: Ex. STP000045, COL Application Rev. 6; Ex. STP000048, "South Texas Project Units 2 & 3 Combined License Application, Rev. 7" (Feb. 1, 2012); Ex. STP000052, "South Texas Project Units 2 & 3 Combined License Application, Rev. 8" (Sept. 17, 2012) (COL Application Rev. 8); Ex. STP000054, "South Texas Project Units 2 & 3 Combined License Application, Rev. 9" (Apr. 17, 2013) (COL Application Rev. 9); *see also* Ex. STP000053, Head, Scott, Regulatory Affairs Manager, STP Units 3 & 4, letter to NRC, "Proposed Update to [COL Application] Part 1 Information" (Jan. 31, 2013).

[27] *See* Ex. STP000054, COL Application Rev. 9, at 1D-16.

[28] *See* Ex. STP000052, COL Application Rev. 8, § 1.2, at 1.0-6; *see also* Ex. STP000049, Head, Scott, Manager Regulatory Affairs, STP Units 3 & 4, letter to NRC, Supplemental Responses to RAI 01-22 and 01-24, attachment at 8 (July 1, 2013).

[29] Ex. NRC000103, Matthews, David, Director, Division of New Reactor Licensing, NRC, letter to Mark McBurnett, Vice President, Regulatory Affairs, NINA (Apr. 29, 2013), at 1 (Staff Second

The Staff's April 2013 determination concluded that Toshiba, through TANE, could exert significant control over NINA because it was at that time the project's sole source of funding.[30] The Staff also found that the proposed Negation Action Plan was not sufficient to neutralize Toshiba's control.[31] The Staff joined with Intervenors at the evidentiary hearing in the position that foreign control bars NINA from obtaining a license.

C. The Evidentiary Hearing

The Board held an evidentiary hearing on Contention FC-1 in January 2014. Financial Analyst Anneliese Simmons testified for the NRC Staff in prehearing testimony and at the hearing. According to Ms. Simmons's prefiled written testimony, NRG Energy notified the Securities and Exchange Commission that it was withdrawing further financial support of the project and that it no longer had "controlling financial interest" in NINA as of March 31, 2011.[32] Ms. Simmons also testified that TANE has the power to approve a budget for remaining loans to NINA.[33] The Staff maintained that because all of the current funding for the project is coming from TANE, TANE's actual control over the project exceeds its ten percent ownership interest.[34]

Determination Letter); Ex. NRC000105, Evaluation by the Office of Nuclear Reactor Regulation on Behalf of the Office of New Reactors, South Texas Project, Units 3 and 4, Docket Nos. 52-012 and 52-013, at 24 (July 1, 2013) (Staff 2013 Evaluation) (enclosure to Ex. NRC000103). The Staff continued its review of other portions of the combined license application, although it indicated that a license would not be issued until applicants satisfy the requirements of AEA Section 103d. and 10 C.F.R. § 50.38. *Id.* at 2.

[30] *See* Ex. NRC000105, Staff 2013 Evaluation, at 24.

[31] *Id*.

[32] Ex. NRCR00101, Staff Direct Testimony at 27 (citing Ex. NRC000129, NRG Energy, Inc., Form 10-Q, Quarterly Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 (May 5, 2011), at 12-13).

[33] *Id*. at 35.

[34] *Id*. at 41; *see also* Ex. NRC000103, Staff Second Determination Letter, at 2 ("The staff has found that, although TANE owns about 10 percent of NINA, its overwhelming financial contributions give it significantly more power than is reflected by this ownership stake.").

Intervenors presented the testimony of an economist, Michael Sheehan.[35] In summary, Dr. Sheehan testified that Toshiba, through TANE, controls NINA because it is the project's "banker," it has the right to nominate one of two NINA board members, and it has the right to nominate NINA's Chief Financial Officer.[36]

NINA argued that TANE has no power to control NINA and only has limited rights as a minority owner and as a lender. NINA's CEO, Mark McBurnett, explained that NINA is governed by a board of managers, with NRG Energy and TANE each appointing one manager.[37] The votes are apportioned between these two managers in accordance with the appointer's ownership share.[38] Therefore, the NRG Energy-appointed manager (who must be a U.S. citizen) controls all decisions requiring a simple majority or supermajority vote.[39] The TANE-appointed manager's agreement is needed only in certain matters that require the NINA board's unanimous consent.[40] Mr. McBurnett further testified that he personally controls all licensing decisions on behalf of NINA and that TANE has no additional authority over licensing-related decisions by virtue of the loans.[41] Jamey Seely, Senior Vice President of NRG Energy,

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[35] *See* Ex. INT000056, *Prefiled Direct Testimony of Michael F. Sheehan, Ph.D. on Behalf of Intervenors Sustainable Energy and Economic Development Coalition (SEED), Susan Dancer, the South Texas Association for Responsible Energy, Public Citizen, Daniel A. Hickl and Bill Wagner Regarding Contention FC-1* (July 1, 2013) (Sheehan Direct Testimony); Ex. INT000065, *Prefiled Rebuttal Testimony of Michael F. Sheehan, Ph.D. on Behalf of Intervenors Sustainable Energy and Economic Development Coalition (SEED), Susan Dancer, the South Texas Association for Responsible Energy, Public Citizen, Daniel A. Hickl and Bill Wagner Regarding Contention FC-1* (July 22, 2013).

[36] Ex. INT000056, Sheehan Direct Testimony, at 11, 13.

[37] *See* Ex. STP000036, McBurnett Direct Testimony, at 30.

[38] *Id*.; *see also* Ex. STP000054, COL Application Rev. 5, § 1D.2.1, 1D-5 to 1D-6 (the board also includes two independent managers (or directors), who must be U.S. citizens and have no voting rights).

[39] Ex. STP000036, McBurnett Direct Testimony, at 30.

[40] *Id*. Decisions requiring unanimous consent include changing the type of business venture, declaring bankruptcy, and extending an interest in NINA to a Toshiba competitor. *Id*. at 31-32.

testified that NRG Energy continues to exercise its majority voting authority over NINA and continues to support development of South Texas Project Units 3 and 4.[42]

NINA argued that TANE's financial contribution (both equity and loans) is only a small part of the project's overall costs.[43] Mr. McBurnett testified that most of the money invested in the project so far has come from U.S. sources.[44] While TANE has a contractual right to approve a budget for the loans it provides, Mr. McBurnett testified that this right is "similar to what would be typical for any lender."[45] He also testified that TANE's loans will be extinguished prior to the start of construction as a condition of project finance.[46]

In addition, NINA argued that its corporate governance structure and the Negation Action Plan prevent Toshiba, through TANE, from influencing any decision relating to nuclear safety, security or reliability. As summarized in NINA's testimony, the Negation Action Plan contains the following provisions to negate potential foreign control with respect to matters involving nuclear safety, security, or reliability of South Texas Project Units 3 and 4:

- The Chairman of the Board, and anyone acting for the Chairman, must be a U.S. citizen.
- The Chief Executive Officer (CEO), anyone acting for the CEO, and the Chief Nuclear Officer of NINA must be U.S. citizens.
- The CEO and Chief Nuclear Officer each must execute a certificate that acknowledges a special duty to the U.S.

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[41] *Id*. at 39.

[42] Ex. STP000038, *Direct Testimony of Applicant Witness Jamey S. Seely Regarding Contention FC-1*, at 7, 19 (July 1, 2013) (Seely Direct Testimony); *see also id*. at 14 (NRG Energy continues to participate in the project due to a potential return on investment).

[43] *See* Ex. STP000036, McBurnett Direct Testimony, at 9-10. According to Mr. McBurnett's testimony, TANE's financial contribution to the project is only 25%, considering both loans and equity. *Id*. at 11; *see also* Tr. at 2496.

[44] Ex. STP000036, McBurnett Direct Testimony, at 9.

[45] *Id*. at 32.

[46] *Id*. at 10-11.

Government to protect against and negate the potential for any foreign ownership, control, or domination of NINA.

- NINA will establish a Security Committee.
- NINA will establish a Nuclear Advisory Committee.
- The Chief Nuclear Officer exercises U.S. control and oversight of nuclear safety issues through control of the NINA Quality Assurance Program and Safeguards Information ('SGI') Program.
- The Negation Action Plan provides that any person involved in the licensing, design, construction, or operation of South Texas Project Units 3 and 4 may raise safety concerns or any potential foreign ownership, control, or domination issues.
- The Negation Action Plan prescribes actions by NINA to ensure U.S. control if any concern related to foreign ownership, control, or domination were to arise.
- Prior to implementation of the Security Committee and Nuclear Advisory Committee, the CEO has ultimate authority on decisions affecting nuclear safety, security, or reliability.[47]

NINA argued that neither the Staff nor Intervenors had identified any instance where Toshiba or TANE had influenced or attempted to influence a decision relating to nuclear safety or security and that they had offered only "unsupported speculation" that such influence was possible.[48]

D. The Board's Decision

The Board in LBP-14-3 found in favor of NINA. In so doing, the Board made several foundational legal rulings governing its analysis and factual conclusions. The Board found that the Standard Review Plan directs that, where the indirect foreign ownership interest is less than 100%, it is appropriate for the Staff's analysis to focus on potential impacts to nuclear safety, security, or reliability.[49] The Board relied on an early Atomic Energy Commission (AEC) decision in the *SEFOR* matter, where the AEC found that the foreign ownership, control, or

[47] Ex. STP000036, McBurnett Direct Testimony, at 43-44 (citing Ex. STP000054, COL Application Rev. 9, at app. 1D (Negation Action Plan)).

[48] *See* Tr. at 2497-99.

[49] LBP-14-3, 79 NRC at 280 (citing Ex. NRC000106, Standard Review Plan, 64 Fed. Reg. at 52,357).

domination analysis "should be given an orientation toward safeguarding the national defense and security."[50] The AEC further held that the phrase "owned, controlled or dominated" "refers to relationships in which the will of one party is subjugated to the will of another."[51]

The Board further noted that where the applicant is not 100% indirectly foreign owned, an applicant may negate the control of a foreign investor through a Negation Action Plan.[52] Applying these principles to NINA, the Board found, as a matter of law, that if NINA's Negation Action Plan "can successfully wall off the foreign entity from influencing [its] decisionmaking regarding nuclear safety, security, and reliability concerns, then the AEA's prohibition on foreign control or domination will not stand in the way" of NINA's application.[53]

The Board then considered whether foreign ownership, control, or domination manifested in NINA's ownership, corporate governance, or financing. It found that none of these considerations showed that NINA is subject to foreign ownership or control. First, noting that the NRC had previously approved license transfers involving indirect, minority foreign ownership, the Board found that Toshiba's ten percent indirect ownership interest would not preclude NINA from obtaining a license.[54]

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[50] *Id.* (citing *General Electric Co. and Southwest Atomic Energy Associates* (Southwest Experimental Fast Oxide Reactor (SEFOR)), 3 AEC 99, 101 (1966)).

[51] *SEFOR,* 3 AEC at 101. This definition was incorporated into the Standard Review Plan. Ex. NRC000106, Standard Review Plan, 64 Fed. Reg. at 52,358.

[52] LBP-14-3, 79 NRC at 281.

[53] *Id*. at 307.

[54] *See id*. at 284-86. The Board considered several relevant prior examples in this area. In particular the Board looked to several licensing actions where indirect minority ownership was approved, including the indirect acquisition by foreign companies of a 9.9% interest in the Seabrook facility (*see* Ex. STP000088, Safety Evaluation by the Office of Nuclear Reactor Regulation, Proposed Merger of New England Electric System and the National Grid Group, PLC, Seabrook Station, Unit 1 (Dec. 10, 1999) (excerpt)); a 12.2% interest in Millstone Unit 3 (*see* Ex. STP000086, Northeast Nuclear Energy Company, et al. (Millstone Nuclear Power Station, Unit 3); Order Approving Application Regarding Merger of New England Electric System and the National Grid Group, PLC, 64 Fed. Reg. 72,367 (Dec. 27, 1999)); and a 2.5% interest in the Trojan Nuclear Plant (*see* Ex. STP000077, Safety Evaluation by the Office of Nuclear

With respect to NINA's corporate governance structure, the Board determined that NRG Energy controls the NINA board of managers by virtue of having "90% of the votes on most decisions and exclusive control of all decisions involving nuclear safety, security, and reliability."[55] It found the corporate governance provisions NINA has in place to restrict foreign control to be comparable to those in other license applications that the NRC has approved.[56] Although TANE has "veto power" over some financial and business decisions, the Board found that these powers are "typical of provisions in prior licensing matters where there was foreign involvement acceptable to the NRC."[57]

The Board found no indication that Toshiba, through TANE, either has attempted to control NINA through finances in the past, or that it has the ability to do so. The Board agreed with NINA that the Staff and Intervenors had provided "no record evidence of any instance where NINA has sought approval from Toshiba or TANE for strategic decisions in order to avoid threats of Toshiba or TANE withholding further loans."[58] The Board further determined that the terms of the loans do not give TANE control over NINA. Specifically, the Board found that when placed "in context," the power to approve a budget for the loans is "quite narrow" because TANE has only the "fleeting ability" to prepare a budget for the loans, but it has no control over how the

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Reactor Regulation, Proposed Merger of Pacificorp and Scottishpower PLC, Trojan Nuclear Plant (Nov. 10, 1999)).

[55] LBP-14-3, 79 NRC at 291.

[56] *Id*. at 291-92 (discussing Ex. NRC000153, NRC, Safety Evaluation for the Proposed Transfer of Clinton Power Station Operating License from Illinois Power Company to AmerGen Energy Company, LLC (Nov. 24, 1999), at 12, and Ex. NRC000154, NRC, Revised Safety Evaluation by the Office of Nuclear Reactor Regulation, Direct and Indirect Transfers of Control or Renewed Facility Operating Licenses due to the Proposed Corporate Restructuring Calvert Cliffs Nuclear Power Plant, Units Nos. 1 and 2; Nine Mile Point Nuclear Station, Unit Nos. 1 and 2; and R.E. Ginna Nuclear Power Plant (Oct. 30, 2009), at 22-28).

[57] *Id*. at 292-93. TANE's minority owner consent rights are designed to protect its business. For example, the majority owner cannot enter into business transactions with affiliates that might dilute the value of the minority owner's interests in the company.

[58] *Id.* at 301.

money is spent.[59] Ultimately, the Board found it "difficult to understand how the NRC Staff 'knows or has reason to believe' that NINA is controlled or dominated by Toshiba or TANE within the meaning of the AEA section 103(d) or 10 C.F.R. § 50.38," given the "absence of any particular examples where Toshiba, through TANE, has exercised control, and in the absence of any corporate or contractual methods by which Toshiba, through TANE, could exercise control over a decision related to nuclear safety, security, or reliability."[60] The Board declined to infer control from the amount of TANE's loans and observed that the Standard Review Plan expressly allows a foreign entity to provide more than 50% of the funding for a project, where an adequate Negation Action Plan is in place.[61]

Moreover, the Board held that NINA's Negation Action Plan would prevent Toshiba, through TANE, from exerting control or domination over NINA in the future.[62] It found that NINA's Negation Action Plan was "consistent with or more restrictive than" other such plans that the NRC has approved in the past.[63] The Board noted the Staff's acknowledgment at the hearing that absent the Staff's perceived financial control issue, the corporate governance provisions of the Negation Action Plan would have been consistent with other plans the Staff

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[59] *Id*. at 302 (citing Ex. STP000036, McBurnett Direct Testimony, at 74); *see also id*. at 293 n.156.

[60] *Id.* at 303-04.

[61] *Id*. at 304 (citing Ex. NRC000106, Standard Review Plan, 64 Fed. Reg. at 52,358). Intervenors argued before the Board—as they do before us—that such control can be inferred because "he who has the gold, makes the rule." *See id*. at 301; *Intervenors' Petition for Review of Licensing Board* Memorandum *and Order LBP-14-03* (May 5, 2014), at 21 (Petition for Review).

[62] LBP-14-3, 79 NRC at 304-09. In evaluating the Negation Action Plan, the Board specifically considered revision 9 of the combined license application. The Board found the provisions calling for a Security Committee and a Nuclear Advisory Committee, both composed entirely of United States citizens, particularly significant. *Id*. at 306 (citing Ex. STP000054, COL Application Rev. 9, at 1D-5 to 1D-6).

[63] *Id*. at 304.

has deemed sufficient.[64] The Board also held, in response to Judge Arnold's concurring opinion, that because the Negation Action Plan has been incorporated into NINA's license application, it is a legally binding commitment.[65] The Board observed that NINA's Negation Action Plan addresses not only how NINA avoids foreign ownership, control and domination now, but how such concerns will be avoided "throughout the entire license period."[66] The Board concluded that NINA had met its burden to show that it is not under foreign ownership, control, or domination.

Intervenors' petition for review followed. The Staff supports Intervenors' petition, in part, because the Staff contends that the Board's ruling could be interpreted to hold that foreign control must have already been exercised before it would bar the issuance of a license.[67] NINA argues that Intervenors do not show either a legal or factual error in the Board's decision that would warrant our review.[68]

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[64] *Id.* at 306 (citing Tr. at 2135 (Simmons): "[I]n any situation where we didn't have financial control, this would be a sufficient Negation Action Plan.").

[65] *Id*. at 308. Judge Arnold opined that the majority reached beyond what was necessary to find that NINA is not subject to foreign control. *See id.* at 314-15. In his view, the Board did not need to make a finding concerning the adequacy of the Negation Action Plan because it had already found that NINA is not currently under foreign control or domination. He explained that "the [foreign ownership, control, or domination] determination is based on current conditions, not hypothetical future conditions. This is different from the [Negation Action Plan] which is primarily to ensure that [foreign ownership, control, or domination] issues do not arise in the future." *Id*. at 314.

[66] *Id*. at 308.

[67] *NRC Staff Answer to Intervenors' Petition for Review of the Licensing Board's Partial Initial Decision on Contention FC-1* (May 30, 2014), at 14, 16-18 (Staff Answer).

[68] *Nuclear Innovation North America LLC's Answer Opposing Intervenors' Petition for Review of LBP-14-3* (May 30, 2014) (NINA Answer). Subsequently, NINA filed a motion for leave to reply to the Staff's answer with an accompanying reply brief. *Nuclear Innovation North America LLC's Motion for Leave to Reply to NRC Staff Answer to Intervenors' Petition for Review of LBP-14-03* (June 9, 2014) and *Nuclear Innovation North America LLC's Reply to NRC Staff Answer to Intervenors' Petition for Review of LBP-14-03* (June 9, 2014). While our rules do not provide for the filing of reply briefs in this circumstance, as a matter of discretion we have reviewed NINA's reply brief. *See* 10 C.F.R. § 2.341(b)(3) (providing for reply briefs by the petitioning party only).

II. DISCUSSION

A. Standard of Review

We will grant review, in our discretion, where the petition raises a "substantial question" whether

> (i) A finding of material fact is clearly erroneous or in conflict with a finding as to the same fact in a different proceeding;
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> (ii) A necessary legal conclusion is without governing precedent or is a departure from or contrary to established law;
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> (iii) A substantial or important question of law, policy or discretion has been raised;
>
> (iv) The conduct of the proceeding involved a prejudicial procedural error; or
>
> (v) Any other consideration which [we] deem to be in the public interest.[69]

We review questions of law *de novo*, but we defer to the Board's findings with respect to the underlying facts unless they are "clearly erroneous."[70] The standard for showing "clear error" is a difficult one to meet: the petitioner must show that the Board's determination is "not even plausible" in light of the record as a whole.[71]

B. Intervenors' Petition Does Not Merit Review

Intervenors argue that errors of law led the Board to erroneous factual conclusions. First, they argue that the Board erred in ruling that the foreign control prohibition is primarily concerned with matters of nuclear safety, security, and reliability. They also claim that the Board failed to recognize that control may exist whenever the foreign entity has the power to control the applicant, without regard to whether the control is exercised or not. They then argue that these two misinterpretations of law caused the Board to erroneously conclude that NINA is

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[69] 10 C.F.R. § 2.341(b)(4).

[70] *Honeywell International, Inc*. (Metropolis Works Uranium Conversion Facility), CLI-13-1, 77 NRC 1, 18-19 (2013); *David Geisen*, CLI-10-23, 72 NRC 210, 224-25 (2010).

[71] *Honeywell*, CLI-13-1, 77 NRC at 18-19; *Geisen*, CLI-10-23, 72 NRC at 224-25.

not under Toshiba's control. As discussed below, we conclude that the Petition does not raise a substantial question of fact or law that warrants review.

1. Intervenors' Claims of Legal Error Do Not Warrant Review

Intervenors first claim that the Board erred in focusing its foreign ownership, control, or domination analysis on whether Toshiba, through TANE, controls NINA with respect to matters relating to nuclear safety, security, or reliability. In support of this claim, Intervenors argue that 10 C.F.R. § 50.38 "does not impose restrictions as to the types of foreign ownership, control, or domination that render an applicant ineligible to apply for and obtain[] a license."[72] They contend that the Board's ruling effectively permits a "type" of foreign ownership, control, or domination that does not relate to nuclear safety, security, or reliability. Because the statute and regulation do not distinguish between "impermissible" and "permissible" foreign ownership, control, or domination, they argue, both of these must be prohibited.[73]

Both NINA and the Staff dispute Intervenors' claim that the Board's focus on nuclear safety, security, and reliability was improper. The Staff urges us to keep in mind that the statute and regulatory provisions must be read in the context of the AEA: "'Nuclear safety, security and reliability' broadly encompasses those matters within the NRC's jurisdiction . . . and properly defines the scope of the foreign control prohibition."[74] The Staff and NINA both argue that the Board's ruling on the scope of the foreign ownership, control or domination analysis is "consistent with the statutory text, Commission precedent, and Staff practice."[75]

We find that Intervenors have not made the case for our review of this legal ruling. Their arguments do not raise a "substantial question" with respect to whether a "necessary legal

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[72] Petition for Review at 11.

[73] *Id.* at 11-15.

[74] Staff Answer at 10.

[75] *Id.; see id.* at 10-13, NINA Answer at 14-15.

conclusion is without governing precedent or [is] contrary to established law."[76] The Board applied guiding precedent; its legal rulings were consistent our longstanding case law, the Standard Review Plan, and established agency practice. In *SEFOR*, the Atomic Energy Commission found that a parallel provision in the AEA, Section 104d. relating to test or research facilities, "should be given an orientation toward safeguarding the national defense and security."[77] That decision further held that whether a foreign entity has "[t]he ability to restrict or inhibit compliance with security or other regulations of the AEC" is of "greatest significance" to a foreign ownership, control, or domination review.[78] The Commission reaffirmed this principle in the 1999 Standard Review Plan.[79]

The Board's decision was also guided by, and consistent with, the NRC's approval of licensing actions involving numerous other facilities.[80] As noted above, the Board considered the NRC's approval of license transfers for the Seabrook, Millstone 3, Trojan, Clinton, and Calvert Cliffs nuclear plants, where appropriate measures barred the foreign owners from involvement in decisions that could affect safety or national security.[81] The Board's analysis is

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[76] 10 C.F.R. § 2.341(b)(4)(ii).

[77] *SEFOR*, 3 AEC at 101.

[78] *Id*.

[79] Ex. NRC000106, Standard Review Plan, 64 Fed. Reg. at 52,357.

[80] *See* LBP-14-3, 79 NRC at 285-86, 291-92.

[81] These were not the only examples the Board could have cited. In addition to the Clinton facility, the Commission approved license transfers for three other facilities to AmerGen, an entity 50% owned by a British company, where the Staff found that license conditions would wall off the British owners from management decisions affecting nuclear safety and national security. *See* Ex. STP000072, Safety Evaluation by the Office of Nuclear Reactor Regulation, Transfer of Facility Operating License from General Public Utilities Nuclear, Inc. et. al., to AmerGen Energy, LLC, and Approval of Conforming Amendment, Three Mile Island Nuclear Station, Unit 1 (undated excerpt), at 17-18; Ex. STP000074, Pastis, Helen N., Senior Project Manager, Office of Nuclear Reactor Regulation, letter to T. Gary Broughton, President GPU Nuclear, Inc. and Gerald R. Rainey, Chief Executive Officer, AmerGen Energy Company, LLC (June 6, 2000) (enclosing *GPU Nuclear, Inc. and Jersey Central Power & Light Company* (Oyster Creek Nuclear Generating Station), Order Approving Transfer of License and Conforming Amendment

consistent with the NRC's usual practice, which prioritizes ensuring that decisions relating to safety at a licensed facility remain in the hands of U.S. citizens.

Intervenors further argue that the Board's ruling conflicts with the language of AEA Section 103d., which they argue provides for "two types of [foreign ownership, control, or domination] analyses."[82] Intervenors point out that the first clause of the law prohibits issuance of a license to a foreign-owned or foreign-controlled entity, and a second sentence separately prohibits issuance of a license if doing so would be "inimical to the common defense and security or to the health and safety of the public."[83] Intervenors argue that because the second clause covers threats to national security and public health and safety, the first clause prohibits foreign ownership, control, or domination "in terms of rights and powers that would normally be indicative of ownership, control and domination."[84] Intervenors conclude that therefore, nuclear safety, security, and reliability "is not the exclusive measure" of whether an applicant is under foreign ownership, domination or control. The Staff and NINA disagree and instead argue that

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(June 6, 2000) (see enclosure at 3-4)); Ex. STP000075, Croteau, Richard P., letter to Gerald R. Rainey, Chief Executive Officer, AmerGen Vermont, LLC and Ross P. Barkhurst, President, Vermont Yankee Nuclear Power Corp. (July 7, 2000) (enclosing *Vermont Yankee Nuclear Power Corporation* (Vermont Yankee Nuclear Power Station), Order Approving Transfer of License and Conforming Amendment (July 7, 2000) (*see* enclosure at 5-6).

[82] Petition for Review at 15.

[83] *Id*. (citing AEA Section 103d.). Section 103d. provides the following:

> No license may be issued to any corporation or other entity if the Commission knows or has reason to believe it is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government. In any event, no license may be issued to any person within the United Stations if, in the opinion of the Commission, the issuance of the license to such person would be inimical to the common defense or to the health and safety of the public.

[84] *Id*.

the agency's foreign ownership, domination, or control analysis is limited to nuclear safety, security, and reliability.[85]

But, even assuming that Intervenors' legal interpretation were correct, their argument is unavailing. Intervenors' argument mischaracterizes the Board's ruling. The Board did not find that nuclear safety and security were the only considerations in its examination of foreign ownership, control, or domination.[86] Rather, it found that these are the most significant considerations among the numerous factors it considered in its decision.[87] The Board found that TANE did not control or dominate NINA, either with respect to nuclear safety, security, or reliability concerns or with respect to any other concern.[88] In doing so, the Board examined various indicia of corporate control; it did not, as Intervenors suggest, hold that control should only be measured with respect to nuclear safety, security, and reliability. Therefore, Intervenors have not shown that the Board's ruling was "a departure from, or contrary to, established law."[89]

Intervenors next argue that the Board erred by disregarding the directive in the Standard Review Plan that foreign control may exist even where the power to control has not been

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[85] Staff Answer at 10; NINA Answer at 14.

[86] Intervenors' argument is similar to their argument that the Board crafted an exception to AEA § 103d. for "permissible" types of foreign ownership, control or domination. *See* Petition for Review at 11-12. As the Staff points out, although the Board referred to "impermissible [foreign ownership, control, and domination]," it did not use the term "permissible [foreign ownership, control, or domination]." Staff Answer at 11-12. We read the Board's terminology as simply referring to the impermissible nature of foreign ownership, control, or domination.

[87] *See* LBP-14-3, 79 NRC at 280 (citing the Standard Review Plan, the Board held that the NRC's "primary focus should remain on safeguarding security and the national defense, although the NRC Staff is to consider a variety of factors").

[88] LBP-14-3, 79 NRC at 309. ("[T]he Board finds no evidentiary support . . . that Toshiba, through TANE, has financial control of NINA"). As discussed above, the Board considered the ownership percentages and voting rights of the two parent entities, and the terms of the loans, among other things. *See supra* text accompanying notes 54-66.

[89] 10 C.F.R. § 2.341(b)(4)(ii); *see AmerGen Energy Co*. (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 259 (2009).

exercised.[90] Intervenors assert that Toshiba could control NINA because "NINA would be willing to acquiesce to Toshiba's demands in exchange for further financing or for not calling its loan."[91] The Staff agrees that the Board's decision raises the issue of whether the Board erred by "requir[ing] evidence of actual, direct foreign control" over the applicant rather than potential control.[92] The Staff argues that control may exist even where the foreign entity has not exercised that control.[93]

We find that the Board's decision does not raise the question Intervenors and the Staff pose. While the Board attached significance to the lack of past instances where Toshiba or TANE exerted control over NINA, it did not hold that unexercised, potential control would not constitute improper foreign ownership, control, or domination. Rather, the Board examined the record for avenues of "potential" control and found none.[94] Because Intervenors do not present a substantial question with respect to this issue and because the Board did not reach a "necessary legal conclusion" concerning "unexercised control" we need not take review of this issue.

2. Intervenors' Claim of Factual Error Does Not Merit Review.

Intervenors also claim that the Board erred in its finding of fact that Toshiba, through TANE, does not financially control NINA. In challenging the Board's factual conclusions, Intervenors reiterate their previous arguments that the Board improperly focused on issues of

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[90] Petition for Review at 22 (citing Ex. NRC000106, Standard Review Plan, 64 Fed. Reg. at 52,358: "An applicant is considered to be foreign owned, controlled, or dominated whenever a foreign interest has the 'power,' direct or indirect, whether or not exercised, to direct or decide matters affecting the management or operations of the applicant.").

[91] *Id*. at 21.

[92] Staff Answer at 14. Although the Staff did not petition for review of the Board's decision, it provided its views on indirect and unexercised control, should we elect to take review. *See id.* at 1 n.2.

[93] *Id.* at 17.

[94] *See* LBP-14-3, 79 NRC at 302-05.

nuclear safety, security, and reliability and improperly required evidence that control had been exercised.[95]

There is a heavy burden to overturn a Board's findings of fact following an evidentiary hearing. The mere presence of evidence supporting both sides does not call for our review, where it appears that the Board considered all the evidence and arguments before it.[96] Intervenors present scant evidence to support the argument that NINA is under Toshiba's control. At bottom, Intervenors have not raised a "substantial question" that the Board's findings of fact are "clearly erroneous."[97]

Initially, Intervenors claim that the Board failed to consider "aspects of control that do not affect nuclear safety or security."[98] They argue that "other important factors" include "stock ownership, voice in management, contractual rights to participate in [] design and construction of [the proposed facility], voice in day-to-day conduct of project activities, legal ownership or interest in the physical assets of the project, rights to use or direct the use of [the proposed facility], whether the foreign entity has a voice in the financial affairs of the applicant, and control of the expenditures of the applicant."[99] Intervenors then list factors—all of which the Board discussed in its decision—that they claim prove TANE's control over NINA.[100]

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[95] Petition for Review at 15-19.

[96] *See, e.g.*, *Geisen*, CLI-10-23, 72 NRC at 225 ("In as hard-fought case as this, we would not expect the record to support one party only."); *Honeywell*, CLI-13-1, 77 NRC at 19 ("The presence of evidence in [petitioner's] favor . . . does not, without more, warrant reversal of the Board's decision.").

[97] 10 C.F.R. § 2.341(b)(4)(i).

[98] Petition for Review at 13-15.

[99] *Id.* at 13-14 (citing *SEFOR*, 3 AEC at 101-02).

[100] *Id*. at 16. These factors include TANE's right to appoint one Board manager (*see* 79 NRC at 287), TANE's right to nominate the Chief Financial Officer (*see id.* at 287-88), and the right to approve a budget (*see id*. at 290, 302).

Intervenors go on to argue that the Board's conclusion that TANE possessed only limited rights was erroneously skewed by its focus on nuclear safety and national security. Intervenors argue that because the proposed facilities are not yet under construction, and NINA will not be the operator, none of NINA's decisions have a potential safety impact.[101] Therefore, Intervenors argue, the Board was "unjustified and arbitrary" in "narrowing" its decision to consider only those impacts.[102]

However, Intervenors misconstrue the Board's conclusion. While NINA's evidence and the Board's findings both focused on showing that TANE had no control over matters involving nuclear safety, security, or reliability, the Board found that there was no control over any matter.[103] The Board's discussion of NINA's general corporate governance and its proposed Negation Action Plan concluded that, in light of all the evidence before it, Toshiba, through TANE, does not control matters pertaining to general corporate governance of issues specifically pertaining to nuclear safety.[104]

Control exists in a relationship where the "will of one party is subjugated to the will of another."[105] In essence, Intervenors argue that Toshiba, through TANE, could coerce NINA into taking some action against NINA's will. The Board found this argument to be purely speculative.[106] The Board had evidence before it that neither Toshiba nor TANE had exerted such control in the past and that NINA would resist any attempt at improper control in the

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[101] *See* Petition for Review at 18.

[102] *Id.* at 19.

[103] LBP-14-3, 79 NRC at 301.

[104] *Id.*; *see* Ex. STP000054, COL Application Rev. 9, at App. 1D (Negation Action Plan). Among the plan's provisions that pertain generally to corporate governance are that both the Chairman of the NINA board and NINA's CEO must be U.S. citizens (*id*. at 1D-5, 1D-11).

[105] Ex. NRC000106, Standard Review Plan, 64 Fed. Reg. at 52,358; *see also SEFOR,* 3 AEC at 101.

[106] LBP-14-3, 79 NRC at 301.

future.[107] In their petition for review, Intervenors do not explain how TANE has subjugated NINA to its will by loaning NINA the money to pursue the business venture that is NINA's primary purpose.[108] Nor do Intervenors specify what "demands" Toshiba might make upon NINA in the future, which are not already considered in the Negation Action Plan. Intervenors do not explain how Toshiba's interests and NINA's interests might diverge in such a way that would be material to this licensing decision. Thus, the petition for review does not articulate any specific errors in the Board's findings of fact or demonstrate that the Board's findings were "not even plausible" in light of the record as a whole.

In sum, we do not find that Intervenors have raised a substantial question of fact or law meriting full review of the Board's decision.

[107] With respect to Intervenors' argument that NINA would accede to Toshiba's "demands" in order to keep Toshiba from withdrawing funds, Mr. McBurnett testified during the hearing that he would rather lose Toshiba's funding than violate NRC regulations: "[if I were] asked to do something inappropriate from a safety, security, or reliability standpoint we're not going to do that. Consequences, for me, are far more severe for willingly failing to [comply with] NRC requirements than they are for losing Toshiba's funding." Tr. at 2042.

[108] See Ex. STP000052, COL Application Rev. 8, § 1.2, 1.0-5 (NINA's "focus is to market and promote ABWR nuclear technology and to develop and construct ABWR nuclear power generation facilities in the U.S.").

III. CONCLUSION

For the foregoing reasons, we *deny* Intervenors' petition for review of LBP-14-3.

IT IS SO ORDERED.

For the Commission

NRC SEAL

/RA/

_____
Annette L. Vietti-Cook
Secretary of the Commission

Dated at Rockville, Maryland,
this 14th day of April, 2015

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
NUCLEAR INNOVATION NORTH AMERICA LLC	)	Docket Nos. 52-012-COL and 52-013-COL
	)	
	)	
(South Texas Project, Units 3 and 4)	)	
	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing **COMMISSION MEMORANDUM AND ORDER CLI-15-07** have been served upon the following persons by the Electronic Information Exchange.

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South Texas Project, Units 3 and 4
Docket Nos. 52-012-COL and 52-013-COL
COMMISSION MEMORANDUM AND ORDER CLI-15-07

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[Original signed by Brian Newell]
Office of the Secretary of the Commission

Dated at Rockville, Maryland
this 14th day of April, 2015

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Stephen G. Burns, Chairman
Kristine L. Svinicki
William C. Ostendorff
Jeff Baran

In the Matter of NUCLEAR INNOVATION NORTH AMERICA LLC (South Texas Project Units 3 and 4)	Docket Nos. 52-012-COL 52-013-COL

CLI-16-02

MEMORANDUM AND ORDER

On November 19, 2015, we held a hearing on the combined license application of Nuclear Innovation North America LLC (NINA) to construct and operate two new nuclear reactors at the South Texas Project site in Matagorda County, Texas.[1] The purpose of the hearing was to consider the sufficiency of the NRC Staff's review of NINA's application. As discussed below, we conclude that the Staff's review has been adequate to support the findings set forth in 10 C.F.R. §§ 52.97(a) and 51.107(a). We authorize issuance of the combined licenses.

[1] *See* In the Matter of Nuclear Innovation North America LLC, Combined Licenses for South Texas Project, Units 3 and 4; Notice of Hearing, 80 Fed. Reg. 61,492 (Oct. 13, 2015) (Notice of Hearing); In the Matter of Nuclear Innovation North America LLC, Combined Licenses for South Texas Project, Units 3 and 4; Notice of Hearing; Correction, 80 Fed. Reg. 69,986 (Nov. 12, 2015); Tr. at 1-225 (attached as Appendix B to Order of the Secretary (Adopting Proposed Transcript Corrections, Admitting Post-Hearing Exhibits, and Closing the Record of the Proceeding) (Dec. 21, 2015) (unpublished)).

I. BACKGROUND

A. Proposed Action

NINA seeks to build two Advanced Boiling Water Reactors (ABWRs) at the South Texas Project site in Matagorda County, Texas. Two units are currently operating at the site: Unit 1 began operation in 1988, and Unit 2 began operation in 1989. NINA's predecessor, South Texas Project Nuclear Operating Company (STPNOC), submitted a combined license application for Units 3 and 4 in September 2007.[2] The Staff accepted the application for review shortly thereafter.[3] NINA became the lead applicant for STP Units 3 and 4, with STPNOC remaining as the proposed operator, in January 2011.[4]

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[2] The Staff published a hearing notice on December 27, 2007, but later withdrew that notice. *See* South Texas Project Nuclear Operating Company; Notice of Hearing and Opportunity To Petition for Leave To Intervene on a Combined License for the South Texas Project Units 3 and 4, 72 Fed. Reg. 73,381 (Dec. 27, 2007); Letter from David Matthews, Office of New Reactors, NRC, to Mark McBurnett, STPNOC (Jan. 30, 2008) (ADAMS accession no. ML080230721) (suspending review of certain portions of the combined license application pursuant to STPNOC's request); *South Texas Project Nuclear Operating Co.* (South Texas Project Units 3 and 4) Order (Feb. 13, 2008) (unpublished) (withdrawing the hearing notice). The hearing notice was re-published early the next year. South Texas Project Nuclear Operating Company Application for the South Texas Project Units 3 and 4; Notice of Order, Hearing, and Opportunity To Petition for Leave To Intervene, 74 Fed. Reg. 7934 (Feb. 20, 2009).

[3] South Texas Project Nuclear Operating Company; Acceptance for Docketing of an Application for Combined License for South Texas Project Units 3 and 4, 72 Fed. Reg. 68,597 (Dec. 5, 2007).

[4] The applicants are NINA; STPNOC; City Public Service Board of the City of San Antonio, Texas; NINA Texas 3 LLC; and NINA Texas 4 LLC. *See* Ex. NRC-001, "The Staff's Statement in Support of the Uncontested Hearing for Issuance of Combined Licenses for the South Texas Project, Units 3 and 4," Commission Paper SECY-15-0123 (Sept. 30, 2015), at 2 (Staff Information Paper) (citing Letter from Mark McBurnett, STPNOC, to NRC Document Control Desk (Jan. 19, 2011) (ML110250369)).

Consistent with 10 C.F.R. § 52.73, NINA's application references the ABWR standard design certification, which was adopted as a final rule in May 1997.[5] Subsequently, the agency issued an amendment to the ABWR design certification rule to comply with the NRC's aircraft impact assessment regulations.[6] Currently, the NRC is reviewing a renewal application for the ABWR design certification submitted by GE Hitachi Nuclear Energy; the STP combined license application does not reference this renewal application.[7]

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[5] *See* 10 C.F.R. pt. 52, app. A; Standard Design Certification for the U.S. Advanced Boiling Water Reactor Design, 62 Fed. Reg. 25,800 (May 12, 1997).

[6] *See* U.S. Advanced Boiling Water Reactor Aircraft Impact Design Certification Amendment, 76 Fed. Reg. 78,096 (Dec. 16, 2011). STPNOC was the applicant for this amendment. Ex. NRC-001, Staff Information Paper, at 3. The reference ABWR Design Control Document is Revision 4 of the ABWR Design Control Document submitted by General Electric Nuclear Energy (GE) in March 1997, as codified in 10 C.F.R. Part 52, Appendix A, and as modified by the September 2010 STP application to amend the ABWR Design Certification Rule. Ex. STP-002, *Applicants' Pre-Filed Testimony of Scott M. Head for the Mandatory Hearing on Uncontested Issues for South Texas Project Units 3 and 4*, at 14 (Nov. 12, 2015) (NINA Pre-filed Testimony) (citing "ABWR Design Control Document," Rev. 4 (Mar. 1997) (ML11126A129)).

[7] While the ABWR renewal application does not directly affect the combined license application for STP Units 3 and 4, GE Hitachi Nuclear Energy recently discovered an issue that is relevant to the STP combined license application. In January 2016, GE Hitachi informed the Staff of an inconsistency between Tier 1 and Tier 2 information in the ABWR certified design related to the Containment Overpressure Protection System (COPS), which is a subsystem of the non-safety related Atmospheric Control System. Letter from Michael Spencer, NRC Staff, to the Commission (Jan. 19, 2016) (Staff Notification). GE Hitachi informed the Staff that "during the process of confirming the detailed design of the COPS pipe diameter in an ABWR under construction, it was determined that the [Tier 1] required minimum capacity COPS flow rate . . . could not be achieved with the current Tier 2 design information." *Id.,* Attachment 1, at 1. As a result, GE Hitachi proposed changes to Tier 2 information that would increase the diameter of the COPS piping and the rupture disk size to maintain the flow rate required by Tier 1. *Id.*

As the Staff noted, where there is a conflict between Tier 1 and Tier 2 of a Design Control Document, Tier 1 controls. 10 C.F.R. pt. 51, app. A, § III.C; Staff Notification Letter, Attachment 1, at 2. "Thus, the constructed plant must satisfy the Tier 1 COPS flow rate notwithstanding the Tier 2 pipe and rupture disk sizes." Staff Notification Letter, Attachment 1, at 2. Further, the Staff noted that a licensee must confirm that the Tier 1 COPS flow rate requirement is met in the

Issues resolved in the ABWR design certification rulemaking or the contested portion of this combined license proceeding are closed and will not be revisited here; however, a brief discussion of these matters is included to provide context for today's decision. We also provide a brief history of this proceeding.

Over the past eight years, the Staff has spent approximately 157,000 hours on the safety and environmental reviews for the application to determine whether it complies with the Atomic Energy Act of 1954, as amended (AEA), the National Environmental Policy Act of 1969 (NEPA), and the NRC's regulations.[8] During this time, the Staff conducted more than 150 public meetings and conference calls, and NINA responded to over 1,700 questions from the Staff.[9] In addition, the Staff considered approximately 380 comments on the draft environmental impact statement.[10]

The Office of New Reactors led the NRC's review, with support from the Office of Nuclear Security and Incident Response, the Office of Nuclear Material Safety and Safeguards, the Office of Nuclear Reactor Regulation, the Office of the General Counsel, and NRC Regions I

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as-built design to complete inspections, tests, analyses, and acceptance criteria (ITAAC) 2.14.6-04. *Id.* If NINA were to change any Tier 2 information with respect to the COPS design, such changes would be subject to the change process in Part 52, Appendix A. *Id.*; 10 C.F.R. pt. 52, app. A, § VII.B. In the Staff's view, this inconsistency does not impact the issuance of combined licenses for STP Units 3 and 4 because it has low safety significance, the existing Tier 1 requirement for the flow rate controls, an ITAAC requires confirmation that the detailed as-built design meets the Tier 1 flow rate, and a process for changing Tier 2 information exists. Staff Notification, Attachment 1, at 2. We agree with the Staff's assessment.

[8] Tr. at 53 (Dr. Uhle).

[9] *Id.* at 54 (Dr. Uhle); Ex. NRC-001, Staff Information Paper, at 4.

[10] Ex. NRC-005-R, *NRC Staff Responses to Commission Pre-Hearing Questions* (Oct. 29, 2015), Attachment: Staff Responses to Commission Pre-Hearing Questions, at 42 (Staff Answers to Pre-Hearing Questions).

and IV.[11] In its environmental review, the Staff worked closely with the U.S. Army Corps of Engineers, a cooperating agency.[12] Other federal agencies, including the U.S. Department of Homeland Security, the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service, also contributed to the Staff's review of NINA's application.[13] In addition, the Staff consulted with state, local, and tribal organizations concerning a variety of issues, including issues arising under the National Historic Preservation Act.[14] The Advisory Committee on Reactor Safeguards (ACRS), a committee of technical experts advising the Commission, provided an independent assessment of the safety aspects of the application.[15]

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[11] Tr. at 53-54 (Dr. Uhle).

[12] *See id.* at 63-64 (Mr. Delligatti).

[13] *See* Ex. NRC-001, Staff Information Paper, at 5; Tr. at 65 (Mr. Delligatti).

[14] Tr. at 64-65 (Mr. Delligatti).

[15] AEA § 182b., 42 U.S.C. § 2232(b); 10 C.F.R. §§ 1.13, 52.87; *see* Letter from John Stetkar, Chairman, ACRS, to Stephen Burns, Chairman, NRC (Feb. 19, 2015) (ML15039A006) (ACRS Letter). The ACRS concluded that "[t]here is reasonable assurance that STP Units 3 and 4 can be built and operated without undue risk to the health and safety of the public" and recommended that the combined license application "be approved following its final revision." *Id.* at 1. It also found that "[t]here is reasonable assurance that the ABWR design and the STP Units 3 and 4 site satisfy" NRC requirements that were imposed as part of the agency's lessons learned from the March 11, 2011 Fukushima Dai-ichi accident. *Id.* at 2. The ACRS identified two issues that the Staff should address "with the issuance" of the combined licenses. *Id.* These issues related to NINA's turbine missile analysis: (1) "The final plant-specific turbine missile [analysis] should explicitly evaluate each turbine control and protection system including the turbine speed sensors, all component failure modes, all required support systems and the measured material toughness properties for the STP Units 3 and 4 monoblock rotors"; and (2) "Rather than imposing a requirement for weekly testing of turbine valves until the turbine missile analysis is submitted, the staff should incorporate a risk-informed analysis to determine the appropriate test frequency." *Id.* The Staff agreed that these two issues would be addressed upon applicant submittal and NRC Staff approval, of a plant-specific turbine missile analysis. Letter from Mark Satorius, EDO, NRC, to John Stetkar, Chairman, ACRS (Apr. 2, 2015), at 2 (ML15072A109) (Staff Response to ACRS); Ex. NRC-001, Staff Information Paper, at 11-12. The ACRS also identified two generic issues that relate to (1) acceptance criteria in NUREG-0800, the Standard Review Plan, for Charpy V-notch energy and fracture appearance transition

NINA did not pursue an early site permit for STP Units 3 and 4.[16] Therefore, all relevant site characteristics, including site geology, hydrology, seismology, and man-made hazards, as well as the potential environmental impacts of the project, were considered as part of the Staff's combined license review and are within the scope of our decision today.

B. Review Standards

The AEA, section 189a., requires that we hold a hearing on each application to construct a nuclear power plant, regardless of whether an interested member of the public requests a hearing on the application.[17] Our Notice of Hearing for the "uncontested" or "mandatory" portion of this proceeding outlines the standards for our review.[18] On the safety side, we must determine whether:

(1) the applicable standards and requirements of the AEA and the Commission's regulations have been met;

(2) any required notifications to other agencies or bodies have been duly made;

(3) there is reasonable assurance that the facility will be constructed and will operate in conformity with the license, the provisions of the AEA, and the Commission's regulations;

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temperature, and (2) "fire-induced spurious actuations that may result from heat or fire damage to digital instrumentation and control signal cabinets, when external connections to those cabinets are made via fiber optic cables." ACRS Letter at 2; Staff Response to ACRS at 2-3. As to the Standard Review Plan issue, the Staff indicated that NINA's assessment of this issue was acceptable, but that it would consider developing specific guidance in the next revision of the SRP. Ex. NRC-001, Staff Information Paper, at 12. As to the fire hazard issue, the Staff noted that the STP 3 and 4 design is adequate, but as a generic matter, the Staff continues to work with stakeholders and committed to update the ACRS in the future. *Id.*

[16] Ex. STP-002, NINA Pre-filed Testimony, at 4. *See generally* 10 C.F.R. pt. 52 subpt. A (describing the process for obtaining an early site permit).

[17] AEA § 189a., 42 U.S.C. § 2239(a).

[18] *See* Notice of Hearing, 80 Fed. Reg. at 61,493.

(4) the applicant is technically and financially qualified to engage in the activities authorized by the license; and

(5) issuance of the license will not be inimical to the common defense and security or to the health and safety of the public.[19]

On the environmental side, we must:

(1) determine whether the requirements of NEPA section 102(2)(A), (C), and (E), and the applicable regulations in 10 C.F.R. Part 51 (the NRC regulations implementing NEPA), have been met;

(2) independently consider the final balance among conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken;

(3) determine, after weighing the environmental, economic, technical, and other benefits against environmental and other costs, and considering reasonable alternatives, whether the combined licenses should be issued, denied, or appropriately conditioned to protect environmental values; and

(4) determine whether the NEPA review conducted by the NRC Staff has been adequate.[20]

We do not review NINA's application *de novo*; rather, we consider the sufficiency of the Staff's review of the application—that is, whether the Staff's review was sufficient to support the required findings.[21]

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[19] 10 C.F.R. § 52.97(a).

[20] *Id.* § 51.107(a).

[21] *See, e.g.*, *DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-15-13, 81 NRC 555, 560-61 (2015).

C. Contested Proceeding

After the Staff docketed the combined license application for STP Units 3 and 4, it provided interested persons an opportunity to challenge the application in a contested proceeding, in accordance with AEA section 189a.[22] A group of organizations and individuals filed an intervention petition opposing the application.[23] The Atomic Safety and Licensing Board granted the initial hearing request of Sustainable Energy and Economic Development Coalition (SEED Coalition), the South Texas Association for Responsible Energy, and Public Citizen (collectively, Intervenors) and admitted five environmental contentions in 2009.[24] While the Board was considering the initial petition, the Intervenors submitted seven new contentions challenging the completeness of the information contained in the application's Mitigative

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[22] *See supra* note 2.

[23] *Petition for Intervention and Request for Hearing* (Apr. 21, 2009).

[24] The Board ruled on the initial petition in two decisions. In LBP-09-21, 70 NRC 581, 638 (2009), the Board admitted one contention relating to the impacts that a severe accident at one of the units would have on the other three. The same decision rejected eighteen proposed contentions and deferred ruling on nine proposed contentions to a later order. *Id*. STPNOC sought an extension to appeal LBP-09-21; we denied that request on the ground that the appeal had not yet come due: where the Board had ruled only partially on the initial intervention petition, the appeal right under 10 C.F.R. § 2.311 did not accrue until the Board had ruled on the entire petition. CLI-09-18, 70 NRC 859 (2009). In LBP-09-25, 70 NRC 867, 896-97 (2009), the Board admitted four of the remaining contentions and rejected the remaining five proposed contentions. The four contentions admitted in LBP-09-25 related to the impacts of increased radiological discharges to the shared main cooling reservoir, the potential increase of tritium in the groundwater, the effects of seepage from the main cooling reservoir to the groundwater, and the effects of increased groundwater withdrawal due to operation of two additional units. *Id.* at 896.

Strategies Report.[25] In January 2010, the Board rejected all of the mitigative strategies contentions.[26]

In July 2010, the Board admitted a new contention, based on a supplement to STPNOC's environmental report, challenging the applicant's analysis of cost-beneficial severe accident mitigation design alternatives (SAMDAs).[27] In that contention, designated CL-2, the Intervenors argued that STPNOC had underestimated the costs of replacement power should an accident at one unit necessitate the shutdown of the other units on the site.[28] In the same decision, the Board ruled that STPNOC's November 2009 environmental report supplement had cured the previous deficiencies forming the bases of the five contentions admitted in LBP-09-21 and LBP-09-25 and granted STPNOC's motion for summary disposition relating to those contentions.[29]

In February 2011, the Board admitted a new contention, based on the Staff's draft environmental impact statement (DEIS) and designated DEIS-1-G, in which the Intervenors argued that the Staff's need for power analysis was incomplete because it failed to consider reduced demand resulting from energy efficiency.[30] In the same ruling, the Board rejected five

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[25] *Intervenors' Contentions Regarding Applicant's Submittal Under 10 C.F.R. § 52.80 and 10 C.F.R. § 50.54(hh)(2) and Request for Subpart G Hearing* (Aug. 14, 2009) (non-public).

[26] LBP-10-2, 71 NRC 190 (2010).

[27] LBP-10-14, 72 NRC 101, 127-29 (2010); *see also* Memorandum and Order (Ruling on Motion for Reconsideration of Contention CL-2) (Aug. 10, 2010) (unpublished).

[28] LBP-10-14, 72 NRC at 122-29.

[29] *Id*. at 147.

[30] LBP-11-7, 73 NRC 254, 289-94, 314 (2011). The Board rejected the other seven bases proposed to support the contention. *Id.* at 285.

other proposed contentions and denied the Staff's and NINA's motions for summary disposition of Contention CL-2.[31] The Board rejected the Staff's argument that the Commission had resolved all environmental issues regarding SAMDAs in this proceeding by rule (the ABWR design certification) because it found that the STP site characteristics were not bounded by the site parameters in the Technical Support Document for the ABWR and, therefore, that SAMDA issues were not resolved by rule.[32]

The Board held evidentiary hearings on Contentions CL-2 and DEIS-1-G in August 2011 and October 2011, respectively.[33] In December 2011, the Board resolved Contention CL-2 in the Staff's and NINA's favor, finding that NINA and the Staff reasonably accounted for the economic factors raised by the Intervenors and demonstrated that no cost-beneficial SAMDAs exist for the combined license application.[34] Shortly thereafter, the Board resolved Contention DEIS-1-G in the Staff's and NINA's favor, finding that the Final Environmental Impact Statement adequately accounts for reduced demand caused by the adoption of energy-efficient building codes in Texas and demonstrates a need for power from the proposed units.[35]

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[31] *Id*. at 314. The five rejected contentions challenged the DEIS discussion of (1) global warming; (2) comparison of greenhouse gas emissions; (3) greenhouse gas mitigation; (4) climate change; and (5) water needs. *See also Intervenors' Motion for Leave to File New Contentions Based on the Draft Environmental Impact Statement* (May 19, 2010).

[32] LBP-11-7, 73 NRC at 274-76.

[33] LBP-11-38, 74 NRC 817, 821 (2011) (First Partial Initial Decision); LBP-12-5, 75 NRC 227, 233 (2012) (Second Partial Initial Decision).

[34] LBP-11-38, 74 NRC at 821, 860.

[35] LBP-12-5, 75 NRC at 254-55.

The third and final contention to be adjudicated on the merits was Contention FC-1, in which the Intervenors argued that NINA (by that point the lead applicant) was subject to foreign control and domination.[36] Toshiba Corporation, which is the vendor for the project as well as the Japanese "grandparent" corporation of one partner in the joint venture, had agreed to provide all the financing to complete the licensing process after another partner discontinued its financial support of the project.[37] In December 2011, after reviewing NINA's foreign ownership Negation Action Plan and responses to requests for additional information, the Staff concluded that the combined license application did not meet the requirements of 10 C.F.R. § 50.38 related to foreign ownership, control, or domination.[38] In April 2014, after an evidentiary hearing, the Board resolved FC-1 in NINA's favor.[39] The Board found that NINA's ownership and management had been structured to ensure that Toshiba could not influence operations or any

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[36] *See* LBP-11-25, 74 NRC 380 (2011) (admitting the proposed contention); *Intervenors' Motion for Leave to File a New Contention Based on Prohibitions Against Foreign Control* (May 16, 2011).

[37] LBP-14-3, 79 NRC 267, 283-84 (2014) (Third Partial Initial Decision). NINA has overall responsibility for the combined license application and the construction of STP Units 3 and 4 until lead licensee responsibilities are transferred to STPNOC at the operation stage. *Id.* at 283 n.77, 284. At the time of the Board's decision, NRG Energy owned approximately ninety percent of NINA and Toshiba America Nuclear Energy Corporation owned approximately ten percent of NINA. *Id.* at 284. Toshiba America Nuclear Energy Corporation is a wholly-owned subsidiary of Toshiba America, Inc., which, in turn, is a wholly-owned subsidiary of Toshiba Corporation. *Id.*

[38] *Id.* at 274 (citing Letter from David Matthews, Office of New Reactors, NRC to Mark McBurnett, NINA (Dec. 13, 2011), at 1 (ML14028A332)).

[39] *Id.* at 312.

decision relating to safety or security.[40] The Intervenors petitioned for review, with the Staff filing an answer in support of elements of the Intervenors' appeal.[41] We denied review.[42]

Also during the pendency of the contested proceeding, the U.S. Court of Appeals for the District of Columbia Circuit vacated and remanded our 2010 Waste Confidence Decision and Temporary Storage Rule, which for this and other NRC licensing actions served as part of the environmental analysis of the impacts of spent fuel storage after the end of a reactor's license term pending ultimate disposal in a repository.[43] In light of the D.C. Circuit's vacatur and remand of the rule, and in response to a number of suspension petitions filed on multiple dockets (including this one), we held in abeyance the issuance of final licensing decisions for affected matters while we addressed the court's remand.[44] To address the court's remand and provide comprehensive analysis of the environmental impacts of continued storage, we issued a final Continued Storage Rule and supporting Generic Environmental Impact Statement.[45]

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[40] *Id.*

[41] *Intervenors' Petition for Review of Licensing Board Memorandum and Order LBP-14-03* (May 5, 2014); *NRC Staff Answer to Intervenors' Petition for Review of the Licensing Board's Partial Initial Decision on Contention FC-1* (May 30, 2014).

[42] CLI-15-7, 81 NRC 481, 499 (2015).

[43] *See New York v. NRC*, 681 F.3d 471 (D.C. Cir. 2012). *See generally* Final Rule: Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operation, 75 Fed. Reg. 81,032 (Dec. 23, 2010); Waste Confidence Decision Update, 75 Fed. Reg. 81,037 (Dec. 23, 2010).

[44] *Calvert Cliffs 3 Nuclear Project, LLC, and UniStar Nuclear Operating Services, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-12-16, 76 NRC 63, 67-69 (2012); *see Petition to Suspend Final Decisions in All Pending Reactor Licensing Proceedings Pending Completion of Remanded Waste Confidence Proceedings* (June 18, 2012).

[45] *Calvert Cliffs Nuclear Project, LLC, and UniStar Nuclear Operating Services, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-14-8, 80 NRC 71, 77 (2014). *See generally* Final Rule, Continued Storage of Spent Nuclear Fuel, 79 Fed. Reg. 56,238 (Sept. 19, 2014); Generic

Concurrent with this action, we lifted the licensing suspension and dismissed, or directed licensing boards to dismiss, proposed contentions that had been filed with the multi-docket suspension petitions and held in abeyance.[46] The Board dismissed the Intervenors' continued storage contention consistent with our direction and terminated the contested portion of the proceeding.[47]

Separately, the Staff considered whether the Continued Storage Rule and the associated Generic Environmental Impact Statement presented new and significant information such that a supplement to the FEIS was required.[48] The Staff compared the fuel cycle impacts analysis in the FEIS with the analysis in the Generic Environmental Impact Statement for Continued Storage and determined that the information in the Generic Environmental Impact Statement did not present a seriously different picture of the environmental impacts of the proposed action when compared to the impacts that were described in the FEIS.[49] The Staff concluded that the new information related to the impacts of the continued storage of spent fuel

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Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel, 79 Fed. Reg. 56,263 (Sept. 19, 2014); "Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel," NUREG-2157, Vols. 1 and 2, (Sept. 2014) (ML14196A105 and ML14196A107). Several groups, including SEED Coalition, have filed a petition for review in the D.C. Circuit challenging the Continued Storage Rule. *New York v. NRC*, Nos. 14-1210, 14-1212, 14-1216, and 14-1217 (consolidated).

[46] *Calvert Cliffs*, CLI-14-8, 80 NRC at 79-81.

[47] LBP-14-14, 80 NRC 144, 145 (2014).

[48] *See* Ex. NRC-005-R, Staff Answers to Pre-Hearing Questions, at 41 (citing Consideration of New Information Regarding the Impacts of the Continued Storage of Spent Fuel for the South Texas Project Electric Generating Station Units 3 and 4 Combined License Application (July 2015) (ML15096A156)).

[49] *Id.*

would not have changed the Staff's conclusions in the FEIS regarding the alternatives or the benefit-cost balance.[50]

SEED Coalition, a party to the contested proceeding, joined a group of petitioners in a multi-docket petition requesting a supplement to the environmental impact statements for a number of applications, including NINA's combined license application for STP Units 3 and 4, to incorporate by reference the analysis in the Generic Environmental Impact Statement for Continued Storage.[51] SEED Coalition also filed a new contention, accompanied by a motion to reopen the record, as a "placeholder" to permit it to challenge the Staff's FEIS for STP Units 3 and 4 assuming that separate challenges to the Continued Storage Rule filed in the D.C. Circuit are successful.[52] We denied the petition to supplement and declined to admit SEED Coalition's "placeholder" contention.[53]

Additionally, SEED Coalition and Public Citizen, together with several other petitioners, raised issues related to the accident at the Fukushima Dai-ichi Nuclear Power Station. In CLI-11-5, the Commission denied petitions filed on multiple dockets to suspend licensing

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[50] *Id.*

[51] *See Petition to Supplement Reactor-Specific Environmental Impact Statements to Incorporate by Reference the Generic Environmental Impact Statement for Continued Spent Fuel Storage* (Jan. 28, 2015).

[52] *SEED Coalition's Motion to Reopen the Record of Combined License Proceeding for South Texas Units 3 and 4 Nuclear Power Plant* (Apr. 24, 2015), at 1-2; *SEED Coalition's Hearing Request and Petition to Intervene in Combined License Proceeding for South Texas Units 3 and 4 Nuclear Power Plant* (Apr. 24, 2015), at 1-3.

[53] *DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-15-10, 81 NRC 535, 544 (2015); *Duke Energy Carolinas, LLC* (William States Lee III Nuclear Station, Units 1 and 2), CLI-15-15, 81 NRC 803, 805 (2015), *appeal docketed*, No. 15-1262 (D.C. Cir. Aug. 7, 2015).

proceedings.[54] In December 2011, the Board rejected a proposed contention arguing that the NRC's Near-Term Task Force Report constituted new and significant information concerning the environmental risks associated with nuclear power plants that should be analyzed in a supplemental DEIS.[55] The Near-Term Task Force Report was prepared by a team of senior NRC employees shortly after the accident to systematically and methodically review the agency's processes and regulations and provide recommendations on whether the agency should make further improvements to its regulatory processes. Relatedly, in February 2014, several petitioners sought to suspend reactor licensing decisions pending the resolution of a petition for rulemaking concerning the environmental impacts of the expedited transfer of spent

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[54] *Union Electric Co. d/b/a Ameren Missouri* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 175-76 (2011); *see Emergency Petition to Suspend All Pending Reactor Licensing Decisions and Related Rulemaking Decisions Pending Investigation of Lessons Learned from Fukushima Daiichi Nuclear Power Station Accident* (Apr. 14, 2011, corrected Apr. 18, 2011) (ML111091154). The petition was not filed on the *South Texas* docket, although the caption included this case and Public Citizen and SEED Coalition joined in the filing. We resolved the petitions in our supervisory capacity and did not address procedural irregularities. *See Callaway,* CLI-11-5, 74 NRC at 158 & n.65. The NRC also recently denied petitions for rulemaking, filed in multiple dockets. The Petitioners requested that the NRC rescind its regulations that "reach generic conclusions about the environmental impacts of severe reactor and/or spent fuel pool accidents and therefore prohibit considerations of those impacts in reactor licensing proceedings." Environmental Impacts of Severe Reactor and Spent Fuel Pool Accidents; Petition for rulemaking; Denial, 80 Fed. Reg. 48,235, 48,238 (Aug. 12, 2015); *see Rulemaking Petition to Rescind Prohibition Against Consideration of Environmental Impacts of Severe Reactor and Spent Fuel Pool Accidents and Request to Suspend Licensing Decision* (Aug. 11, 2011).

[55] LBP-11-39, 74 NRC 862, 871-72 (2011).

fuel from the spent fuel pool to dry cask storage.[56] In July 2014, we denied the suspension petitions and provided direction on related requests.[57]

D. Uncontested Proceeding

The scope of an uncontested proceeding is defined by the scope of the contested proceeding: all of the safety and environmental issues in NINA's combined license application, except for the contested matters and those previously resolved as part of the ABWR design certification rulemaking, are subject to our review in the uncontested proceeding.[58] Before we held the first mandatory hearings for combined license applications, we directed the Staff to provide us with an information paper on its review of each application concurrent with the completion of its final safety or environmental review document, whichever comes later.[59] The Staff issued the FEIS for STP Units 3 and 4 in February 2011 and the final Safety Evaluation Report (SER) in September 2015, which triggered the start of the uncontested portion of this

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[56] *See Petition to Suspend Reactor Licensing Decisions and Reactor Re-licensing Decisions Pending Completion of Rulemaking Proceeding Regarding Environmental Impacts of High-Density Pool Storage of Spent Fuel and Mitigation Measures* (Feb. 27, 2014).

[57] *See DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-14-7, 80 NRC 1, 10 (2014) (directing the Staff to deny the rulemaking petitioners' collateral request to suspend licensing decisions on all other pending proceedings and directing the Staff to seek Commission approval if it determines that suspension of NRC rules or the environmental assessments considering SAMDAs is necessary). The Staff continues to evaluate the petition for rulemaking concerning the environmental impacts of the expedited transfer of spent fuel from the spent fuel pool to dry cask storage. *See* PRM-51-31, Docket ID NRC-2014-0055 at http://www.nrc.gov/reading-rm/doc-collections/rulemaking-ruleforum/petitions-by-year/2014/.

[58] *See* Notice of Hearing, 80 Fed. Reg. at 61,493.

[59] *See generally* Staff Requirements—SECY-10-0082—Mandatory Hearing Process for Combined License Application Proceedings Under 10 C.F.R. Part 52 (Dec. 23, 2010), at 1-2 (ML103570203). This direction has been memorialized in our procedures. *See* Internal Commission Procedures, ch. IV, "Commission Meetings/Hearings," at IV-13 (June 12, 2012).

proceeding.[60] We received the Staff's information paper on September 30, 2015, shortly after the Staff's issuance of the SER.[61]

1. Pre-Hearing Activities

We issued the Notice of Hearing on October 13, 2015, and set the schedule for the parties—the Staff and NINA—to file their witness lists, as well as for NINA to provide its pre-filed testimony.[62] We also issued a number of questions on safety-related and environmental topics for the Staff and NINA to answer in writing before the hearing.[63] In addition, we invited interested states, local government bodies, and federally-recognized Indian tribes to provide statements of issues or questions for us to consider as part of the uncontested proceeding.[64] We received one response from Matagorda County Judge Nate McDonald, expressing support for the issuance of the combined licenses.[65]

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[60] *See* Ex. NRC-010A and NRC-010B, "Environmental Impact Statement for Combined Licenses (COLs) for South Texas Project Electric Generating Station Units 3 and 4" (Final Report), NUREG-1937, Vols. 1-2 (Feb. 2011) (ML11049A000 and ML11049A001) (FEIS); Ex. NRC-008, "Final Safety Evaluation Report for the South Texas Project Units 3 and 4 Combined License Application" (Sept. 29, 2015) (ML15232A128) (Safety Evaluation Report); Ex. NRC-009, "Final Safety Evaluation Report for the South Texas Project Units 3 and 4 Combined License Application, Chapters with Sensitive Information—Chapter 1, Chapter 3, and Chapter 19, Attachment A (Sept. 29, 2015) (ML15089A104, ML15226A256, ML15132A346) (non-public).

[61] *See* Ex. NRC-001, Staff Information Paper, at 1.

[62] Notice of Hearing, 80 Fed. Reg. at 61,493. The Staff's information paper serves as its pre-filed testimony.

[63] *See* Order (Transmitting Pre-Hearing Questions) (Oct. 16, 2015) (unpublished) (Pre-Hearing Question Order).

[64] Notice of Hearing, 80 Fed. Reg. at 61,493-94.

[65] Letter from Nate McDonald, County Judge, Matagorda County, to Annette Vietti-Cook, Secretary, NRC (Oct. 7, 2015) (ML15280A414); *see also* Tr. at 18 (Mr. McBurnett) (describing Judge McDonald as the elected chief executive for Matagorda County and serving as the county emergency management director in that capacity).

2. The Hearing

The Secretary of the Commission transmitted a scheduling note to NINA and the Staff setting the topics for and the order of presentations at the hearing.[66] In the first panel, witnesses for NINA and the Staff provided an overview of NINA's combined license application and the Staff's review. The next three panels focused on safety-related issues, and the final panel focused on environmental issues.

The Staff made available one hundred witnesses at the hearing, thirteen of whom were scheduled panelists.[67] Ten additional witnesses answered questions on topics relating to their expertise at the hearing. A total of eight witnesses offered testimony on behalf of NINA on panels at the hearing and in pre-filed written testimony.[68]

a. Summary of the Overview Panels

Mark McBurnett, Chief Executive Officer (CEO) of NINA, Dennis Koehl, President/CEO of STPNOC, and Scott Head, Manager of Regulatory Affairs for NINA, represented NINA on the overview panel.[69] Mr. McBurnett provided background on the development of NINA's license application, including the ownership structure for the units, the decision to pursue combined

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[66] Scheduling Note, "Hearing on Combined Licenses for South Texas Project, Units 3 and 4: Section 189a. of the Atomic Energy Act Proceeding (Public Meeting)," (Scheduling Note) (revising the scheduling note issued on November 5, 2015) (ML16014A431).

[67] *See* Tr. at 12-15, 178-79; *NRC Staff Witness List* (Nov. 18, 2015); Scheduling Note at 2-5.

[68] *See Witness List of Nuclear Innovation North America LLC for the Hearing on Uncontested Issues* (Oct. 29, 2015); Tr. at 11; Ex. STP-002, NINA Pre-filed Testimony.

[69] Tr. at 17-18.

licenses, the selection of the ABWR design, and the selection of Toshiba as a vendor.[70] Mr. Head provided additional information on the history of the development of the ABWR, some key aspects of the certified design, departures from the certified design, and selection of the STP site.[71]

Jennifer Uhle, Director of the Office of New Reactors, Gary Holahan, Deputy Director of the Office of New Reactors, Frank Akstulewicz, Director of the Division of New Reactor Licensing in the Office of New Reactors, and Mark Delligatti, Deputy Director of the Division of New Reactor Licensing in the Office of New Reactors, provided background on the Staff's review of the combined license application.[72] Mr. Holahan explained that the Staff focused its review on the plant-specific aspects of the application—operational programs, site-specific design features, combined license information items, and departures from the certified design.[73] He noted that this combined license application is the first to reference the ABWR design, and NINA's application likewise references the Aircraft Impact Assessment amendment to the ABWR.[74] Mr. Akstulewicz provided a summary of the Staff's findings under 10 C.F.R. § 52.97(a).[75] Mr. Delligatti provided background on the Staff's environmental review, including a

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[70] *See* Ex. STP-011, NINA Presentation Slides: Overview Presentation (Nov. 19, 2015) (NINA Overview Presentation); *see also* Tr. at 20-24 (Mr. McBurnett).

[71] *See* Tr. at 25-34 (Mr. Head); Ex. STP-011, NINA Overview Presentation, at 3-6.

[72] *See* Ex. NRC-011, Staff Presentation Slides—Overview (Nov. 19, 2015) (Staff Overview Presentation); Tr. at 51-70.

[73] Tr. at 57 (Mr. Holahan).

[74] *Id.* (Mr. Holahan); Ex. NRC-011, Staff Overview Presentation, at 4.

[75] Tr. at 60-62 (Mr. Akstulewicz); Ex. NRC-011, Staff Overview Presentation, at 10-12.

summary of the Staff's findings in accordance with NEPA sections 102(2)(A), (C), and (E) and 10 C.F.R. § 51.107(a).[76]

b. Summary of the Safety Panels

The first safety panel focused on departures from the certified design and exemptions from the regulations, including the exemption from the financial qualification regulations.[77] Mr. Head testified for NINA, and Mr. McBurnett joined him on the panel.[78] Tom Tai, Senior Project Manager and lead project manager for the STP Units 3 and 4 review, Licensing Branch 2, Office of New Reactors; Richard Turtil, Senior Financial Analyst, Financial Analysis and International Projects Branch, Office of Nuclear Reactor Regulation; and Dinesh Taneja, Senior Electronics Engineer, Instrumentation, Controls, and Electronics Engineering Branch, Office of New Reactors, provided testimony for the Staff.[79] Mr. Turtil discussed NINA's request for an exemption from the financial qualification requirements in 10 C.F.R. § 50.33(f) and Part 50, Appendix C.[80] Mr. Taneja discussed the Staff's review of the Tier 1 departure on instrumentation and control.[81] In addition to departures and exemptions, the remainder of

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[76] Tr. at 63-69 (Mr. Delligatti); Ex. NRC-011, Staff Overview Presentation, at 12-18.

[77] *See* Tr. at 69 (Dr. Uhle); Ex. STP-012, NINA Presentation Slides: Safety Panel 1—Financial Qualifications (Nov. 19, 2015); Ex. NRC-012, Staff Presentation Slides—Safety Panel 1 (Nov. 19, 2015) (Staff Safety Panel 1 Presentation).

[78] Tr. at 89-92.

[79] *Id.* at 92-103; Scheduling Note at 2.

[80] Tr. at 96-100 (Mr. Turtil). This exemption is discussed in greater detail in section II.A.1, *infra*.

[81] Tr. at 100-03 (Mr. Taneja).

chapter one of the final Safety Evaluation Report was subject to our examination during the first safety panel.[82]

The second safety panel focused on the novel issues associated with the review of actions to address (1) NRC Bulletin 2012-01, "Design Vulnerability in Electric Power System" and (2) the issues in Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events."[83] Mr. Head provided testimony for NINA, with Steven Thomas, Engineering Manager for NINA, and Willem Mookhoek, Licensing Supervisor for NINA, on the panel.[84] Mr. Tai; Ryan Nolan, Reactor Systems Engineer, Plant Systems Branch, Office of New Reactors; and Sheila Ray, Senior Electrical Engineer, Electrical Engineering Branch, Office of Nuclear Reactor Regulation, provided testimony for the Staff.[85] The remaining portions of chapters eight and twenty-two of the final Safety Evaluation Report, as well as chapters eleven though sixteen, eighteen, and nineteen were also subject to our examination during the second safety panel.[86]

The third safety panel focused on the design basis flood assessment for the STP site and the Staff's review of the qualifications of Toshiba as an alternate vendor for the certified

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[82] Scheduling Note at 2.

[83] *Id.* at 3; Tr. at 69-70 (Dr. Uhle); *see* NRC Bulletin 2012-01: Design Vulnerability in Electric Power System (July 27, 2012), at 1 (ML12074A115); Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond–Design-Basis External Events (Effective Immediately), EA-12-049 (Mar. 12, 2012), at 3 (ML12054A735) (Order EA-12-049).

[84] Tr. at 119-22; Scheduling Note at 3.

[85] Tr. at 119, 122-31; Scheduling Note at 3.

[86] Scheduling Note at 3.

ABWR design.[87] Mr. Head provided testimony for NINA, with Mr. Thomas and Mr. Mookhoek on the panel.[88] Mr. Tai; Dr. Henry Jones, Senior Hydrologist, Hydrology and Meteorology Branch 1, Office of New Reactors; and Richard McIntyre, Senior Reactor Operations Engineer, Quality Assurance Vendor Inspection Branch, Office of New Reactors, provided testimony for the Staff.[89] The remaining portions of chapters two and seventeen of the final Safety Evaluation Report, as well as chapters three though seven, nine, and ten were also subject to our examination during the third safety panel.[90]

c. Summary of the Environmental Panel

The environmental panel summarized the process for developing the environmental impact statement, the analysis of alternatives, the assessment of new information, and the conclusions and recommendations of the final environmental impact statement.[91] Mr. Head testified for NINA and was joined on the panel by Peggy Travis, Environmental Supervisor for STPNOC, and Russell Kiesling, Chief Consultant, Kiesling Ventures LLC, who was the environmental lead for NINA.[92] Patricia Vokoun, Project Manager, Environmental Projects Branch, Office of New Reactors, and Andrew Kugler, Senior Project Manager, Environmental Technical Support Branch, Office of New Reactors, provided testimony for the Staff.[93]

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[87] *Id.* at 4; Tr. at 70 (Dr. Uhle).

[88] Tr. at 148, 150-53; Scheduling Note at 4.

[89] Tr. at 148, 153-61; Scheduling Note at 4.

[90] Scheduling Note at 4.

[91] Scheduling Note at 5.

[92] Tr. at 184-87; Scheduling Note at 5.

[93] Tr. at 185, 187-98; Scheduling Note at 5.

3. Post-Hearing Questions

After the hearing, we issued additional questions for written answers from NINA and the Staff.[94] We then admitted NINA's and the Staff's responses as exhibits, adopted corrections to the hearing transcript, and closed the evidentiary record.[95]

II. DISCUSSION

A. Exemptions and Departures

NINA submitted four requests for specific exemptions from our regulations that are outside the scope of the design certification rule; one request was later withdrawn.[96] In addition, the combined license application contains a total of 275 departures from the ABWR certified design.[97] The Staff performed an extensive review of the exemption requests and departures and noted that NINA effectively responded to its requests for additional information.[98]

1. Exemptions

The Staff evaluated and found acceptable three requests to exempt NINA from NRC regulations outside the scope of the design certification rule. First, NINA requested an exemption from the definition of "construction" in 10 C.F.R. § 50.10(a)(1) to allow the installation of crane foundation retaining walls during the excavation process prior to the issuance of the

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[94] Order (Transmitting Post-Hearing Questions) (Nov. 30, 2015) (unpublished) (Post-Hearing Questions Order).

[95] Order (Adopting Proposed Transcript Corrections, Admitting Post-Hearing Exhibits, and Closing the Record of the Proceeding) (Dec. 21, 2015) (unpublished).

[96] Ex. NRC-001, Staff Information Paper, at 13 (citing Letter from Mark McBurnett, STPNOC, to Document Control Desk, NRC (Sept. 16, 2009), at 2 (ML092930393) (withdrawing previous request for exemption from Appendix A to 10 C.F.R. Part 52, Section IV.A.2.a)).

[97] Ex. STP-002, NINA Pre-filed Testimony, at 10.

[98] Tr. at 114-16 (Mr. Tai, Mr. Turtil, Mr. Taneja).

combined licenses.[99] Second, NINA sought an exemption from the material control and accounting requirements of 10 C.F.R. §§ 70.22(b), 70.32(c), 74.31, 74.41, and 74.51, which either do not apply to reactors or expressly contain exclusions for reactors licensed under Part 50.[100]

Third, NINA requested an exemption from our financial qualifications requirements.[101] Under 10 C.F.R. §§ 52.77, 50.33(f), and Part 50, Appendix C, a combined license applicant must submit information that demonstrates that it either possesses or has reasonable assurance of obtaining the funds necessary to cover estimated construction and operating costs for the term of the license. Our regulations also require that an applicant identify the specific sources of funds on which it will rely.[102] The Staff was not able to find that NINA met these financial qualifications requirements "primarily due to an absence of specifically identified sources of funds."[103]

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[99] *See, e.g.*, Ex. STP-002, NINA Pre-filed Testimony, at 9; Ex. NRC-001, Staff Information Paper, at 17. The Staff approved this request in 2010, but NINA has not yet installed the two crane foundation retaining walls. Ex. NRC-001, Staff Information Paper, at 17 (citing Letter from George Wunder, Sr. Project Manager, NRC to Mark McBurnett, STPNOC (Nov. 5, 2010) (ML102770454)).

[100] *See, e.g.*, Ex. STP-002, NINA Pre-filed Testimony, at 9. These exclusions do not include Part 52 applicants, even though, for purposes of these requirements, the applications are for the same facility type. The Staff evaluated the request and determined that it satisfies the criteria for exemption, primarily because the NRC has found that these requirements are unnecessary for similar Part 50 applicants. Accordingly, the same exemption has been granted to applicants for previously-issued combined licenses. Ex. NRC-001, Staff Information Paper, at 16-17. For both Part 50 and Part 52 applicants, 10 C.F.R. Part 74, Subpart B (excluding section 74.17), contains material control and accounting performance requirements. *Id.*

[101] *See, e.g.*, Ex. STP-002, NINA Pre-filed Testimony, at 9.

[102] Ex. NRC-001, Staff Information Paper, at 14.

[103] *Id.*

Outside of this adjudication, the Staff provided us a recommendation that the NRC proceed with a rulemaking to amend or rescind the 10 C.F.R. Part 50 financial qualifications demonstration requirements.[104] The Staff proposed, among other things, that the financial qualifications requirements for merchant-plant initial-license applicants be changed to be consistent with the Part 70 standard, which provides that an application will be approved if the applicant (among other things) "appears to be financially qualified."[105] We approved the Staff's recommendation and directed that in the rulemaking the Staff "should seek to develop a standard of review that approximates, as appropriate, the approach currently used for 10 CFR Part 70 applications, but does not reduce the standard of review below that of 'appears to be financially qualified.'"[106] We also directed the Staff to consider using an exemption process "that anticipates the outcome of the proposed changes to the current" requirements during the pendency of the rulemaking "to address existing and emergent cases."[107]

The Staff issued a Draft Regulatory Basis for the Financial Qualifications for Reactor Licensing Rulemaking in June 2015.[108] The Draft Regulatory Basis provides the basis for a

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[104] *See* "Policy Options for Merchant (Non-Electric Utility) Plant Financial Qualifications," Commission Paper SECY-13-0124 (Nov. 22, 2013), at 16-18 (ML13057A006).

[105] *Id.* at 17-18; 10 C.F.R. § 70.23(a)(5) ("An application for a license will be approved if the Commission determines that . . . the applicant appears to be financially qualified to engage in the proposed activities in accordance with the regulations in this part.").

[106] Staff Requirements—SECY-13-0124—Policy Options for Merchant (Non-Electric Utility) Plant Financial Qualifications (Apr. 24, 2014), at 1 (ML14114A358) (quoting 10 C.F.R. § 70.23(a)(5)).

[107] *Id.* at 2 (unnumbered).

[108] Ex. NRC-001, Staff Information Paper, at 14 (citing Financial Qualifications for Reactor Licensing Rulemaking: Draft Regulatory Basis Document (June 2015) (ML14324A706) (Draft Regulatory Basis)); Financial Qualifications for Reactor Licensing; Draft regulatory basis; public meeting and request for comment, 80 Fed. Reg. 34,559 (June 17, 2015).

future proposed rule that, if published, would solicit public comment on a proposal to change the Part 50 standard. The proposed rule would not require the applicant to demonstrate that it possesses or can provide reasonable assurance of obtaining the funds necessary for construction and operation. Rather, the applicant would be held to the standard currently used in Part 70, that it "appears to be financially qualified."[109] Under the approach set out in the Draft Regulatory Basis, the applicant would provide a construction cost estimate and financial capacity plan.[110] The plan would describe how the applicant will finance construction and operation of the proposed facility and would demonstrate that the applicant has the financial capacity to obtain the necessary financing for construction and operation.[111]

NINA requested an exemption from the NRC's financial qualifications requirements in 10 C.F.R. §§ 52.77, 50.33(f), and Part 50, Appendix C and proposed instead to satisfy a financial qualifications standard similar to that of 10 C.F.R. Part 70, consistent with the approach envisioned in our Staff Requirements Memorandum for SECY-13-0124.[112] In its request, NINA

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[109] Ex. NRC-001, Staff Information Paper, at 14.

[110] Draft Regulatory Basis at 13-14. As currently envisioned, this plan would include descriptions of the management team and of the anticipated funding methods and sources, including a discussion of past successes with such financing used in past energy or other large build projects. *Id.*

[111] *Id.* An applicant's financial capacity "reflects [its] level of understanding of the size and scope of the project, including the level of capital necessary to undertake the project, and . . . the organizational and human resources, experience, skills, and expertise required to obtain proper financing." *Id.* at 14. The Draft Regulatory Basis distinguishes between those applicants that have more than fifty percent of their financing and those with fifty percent or less financing at the time of the application. For the latter, the applicant is expected to propose one or more license conditions that will ensure funding is available before beginning reactor construction. *Id.* at 15 & n.10 (noting that the use of license conditions is not required and that an applicant could "propose an alternate approach" for the NRC to consider).

[112] Letter from Scott Head, NINA, to Document Control Desk, NRC (May 18, 2015), at 2 (ML15140A077) (NINA Exemption Request). This amended exemption request superseded an

addressed the standards governing exemptions in 10 C.F.R. §§ 52.7 and 50.12, submitted a financial capacity plan with proposed license conditions, and referenced previously submitted construction and operational cost estimates.[113] The Staff reviewed NINA's exemption request using the analysis it prepared for the Draft Regulatory Basis.[114] The Staff concluded that NINA demonstrated its financial capacity, that its construction and operational cost estimates are reasonable, and that the proposed license conditions, as revised by the Staff, were consistent with our direction in the Staff Requirements Memorandum for SECY-13-0124.[115] As approved by the Staff, the license conditions require NINA to provide updated cost estimates and demonstrate secured financing prior to construction and operation.[116]

The Staff further concluded that the exemption request satisfied the requirements of 10 C.F.R. § 50.12.[117] Section 50.12(a) provides that the Commission may grant exemptions from the regulations, if the exemptions are authorized by law, will not present an undue risk to

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earlier request: Letter from Scott Head, NINA, to Document Control Desk, NRC (June 19, 2014) (ML14175A142).

[113] NINA Exemption Request at 2; Ex. NRC-001, Staff Information Paper, at 15; *see also* Tr. at 91-92 (Mr. Head) (discussing NINA's financial capacity plan and stating the expectation that NINA will receive funding through project financing using a combination of loans under the Department of Energy loan guarantee program, from the Japan Bank of International Cooperation, and from other sources, as well as equity).

[114] *See* Ex. NRC-001, Staff Information Paper, at 15.

[115] *Id.* The comment period on the Draft Regulatory Basis ended on August 3, 2015. The Staff received three comments on the draft basis, all of which supported amending the financial qualification requirements for reactors; none suggested a stricter standard than the one the Staff has applied in its review of NINA's exemption request here. *Id.* at 15 n.3; *see also* Tr. at 113-14 (Mr. Turtil).

[116] Ex. NRC-001, Staff Information Paper, at 15.

[117] *Id.*

the public health and safety, and are consistent with the common defense and security and when special circumstances exist. First, the Staff determined that the exemption is authorized by law because the exemption would not conflict with the AEA or any other law.[118] The Staff observed that the AEA affords us "broad discretion to prescribe requirements for financial qualifications."[119]

Second, the Staff found that the exemption does not present an undue risk to the public health and safety because the exemption is not directly related to any safety requirements.[120] Although the financial qualifications regulations are intended to protect public health and safety (for example, to prevent safety lapses caused by underfunding), the Staff observed that the NRC has not found a direct correlation between pre-licensing financial reviews and later safe construction and operation, and the NRC maintains a number of programs and processes that more directly ensure safe construction and operation.[121] Moreover, consistent with the analysis in its Draft Regulatory Basis, the Staff concluded that NINA meets the Part 70 standard for financial qualifications, as appropriately modified for a combined license applicant (that is, NINA

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[118] Ex. NRC-008, Safety Evaluation Report, § 1.11S.5.4; *see* 10 C.F.R. § 50.12(a).

[119] Ex. NRC-008, Safety Evaluation Report, § 1.11S.5.4, at 1-177; *see* AEA § 182a., 42 U.S.C. § 2232(a) ("Each application for a license hereunder . . . shall specifically state such information as the Commission, by rule or regulation, may determine to be necessary to decide such of the technical and financial qualifications of the applicant . . . ."); *New England Coal. on Nuclear Pollution v. NRC*, 582 F.2d 87, 93 (1st Cir. 1978) ("The [AEA] gives the NRC complete discretion to decide what financial qualifications are appropriate.").

[120] Ex. NRC-008, Safety Evaluation Report, § 1.11S.5.4, at 1-177.

[121] *Id.* at 1-176; *see* 10 C.F.R. § 50.12(a). These programs include a detailed technical licensing review, the construction reactor oversight process, the reactor oversight process, the resident inspector program, the operating experience program, the vendor inspection program, and the quality assurance inspection program. Ex. NRC-008, Safety Evaluation Report, § 1.11S.5.4.

appears to be financially qualified) and the license conditions would prevent NINA from constructing or operating STP Units 3 and 4 unless and until the necessary funding is secured.[122]

Third, the Staff found that the exemption is consistent with the common defense and security.[123] The Staff determined that the exemption does not relate to any requirements that directly govern security-related activities at proposed Units 3 and 4.[124] The Staff also found that NINA satisfied the Part 70 standards as modified in the Draft Regulatory Basis, and, relatedly, the license conditions ensure that the common defense and security will not be impacted.[125]

And fourth, the Staff asserts that special circumstances are present as described in 10 C.F.R. § 50.12(a)(2)(vi): there is a material circumstance not considered when the regulation was adopted for which it would be in the public interest to grant an exemption.[126] Because the Staff relies exclusively on that section, we must be consulted before the exemption is granted.[127] The Staff's Information Paper served as the necessary consultation.[128] NINA is the first

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[122] *Id.* at 1-777 to 1-778.

[123] *Id.* at 1-778.

[124] *Id.*

[125] *Id.*; *see* 10 C.F.R. § 50.12(a).

[126] Ex. NRC-008, Safety Evaluation Report, § 1.11S.5.4, at 1-778; Ex. NRC-001, Staff Information Paper, at 15-16; *see* 10 C.F.R. § 50.12(a)(2)(vi). In its exemption request, NINA asserted that § 50.12(a)(2)(ii) also applies because the Part 50 financial qualification requirements are not necessary to achieve the purpose of the rule—to prevent safety lapses from underfunded projects—because the license conditions will ensure that the project will only proceed once adequate funding is obtained. NINA Exemption Request, Attachment 1, at 6.

[127] *See* 10 C.F.R. § 50.12(a)(2)(vi).

[128] *See* Ex. NRC-001, Staff Information Paper, at 16.

applicant to seek an initial license as a merchant plant.[129] In the Staff's view, the current Part 50 financial qualifications standards go "beyond the NRC's mandate of ensuring safety and have become an unnecessary impediment to licensing."[130] While our rules contemplate applications from merchant plants, "[a]ll current nuclear power reactor licensees were found to be financially qualified at initial licensing [of the facility] on the basis of their status as rate-regulated utilities."[131] Merchant plants, unlike rate-regulated utilities, may not have a predictable source of funds for construction or operation at the time of licensing because they cannot recover costs through the ratemaking process like utility applicants can.[132] And without identified sources of funds, an applicant cannot meet our current Part 50 financial qualification standards. Consistent with our direction in the Staff Requirements Memorandum for SECY-13-0124, the Staff's review anticipates the outcome of the proposed changes to the regulation by virtue of its use of the Draft Regulatory Basis.[133] For this reason, and for those discussed above, we approve the Staff's decision to grant NINA's requested exemption, subject to the license conditions identified by the Staff.

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[129] STP Units 3 and 4 are considered merchant plants, with over ninety percent of their electricity to be sold in deregulated markets. Tr. at 96 (Mr. Turtil).

[130] Ex. NRC-001, Staff Information Paper, at 16; Tr. at 100 (Mr. Turtil).

[131] Draft Regulatory Basis at 6.

[132] *Id.*

[133] Ex. NRC-008, Safety Evaluation Report, § 1.11S.5.4, at 1-778 to 1-779.

2. Departures

NINA identified 275 departures from the certified design in its application.[134] Of the 275 departures in the combined license application, 246 are standard departures, which would apply to future ABWR combined license applicants that use the STP Units 3 and 4 combined license application as the reference application for the ABWR.[135] The Staff noted that the ABWR design was certified in 1997, a decade before the STP combined license application was docketed, and therefore, it was "reasonable to expect that improvements in technology and innovations in design will occur over such a period and that these improvements and innovations will result in proposed design changes."[136]

The Staff reviewed all departures to ensure that NINA adhered to the applicable regulatory criteria.[137] When evaluating the departures, the Staff evaluated the impacts of a departure in its totality; for example, a change to a pump, valve, control circuit, or piping system is not evaluated in isolation but may require the coordination of engineers in various disciplines to ensure that all of the impacts of the change are considered.[138] Additionally, NINA evaluated the cumulative change in risk from its departures, and the Staff found that the cumulative impact

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[134] Ex. NRC-001, Staff Information Paper, at 17; Ex. STP-002, NINA Pre-filed Testimony, at 10-11.

[135] Ex. STP-002, NINA Pre-filed Testimony, at 11.

[136] Ex. NRC-005-R, Staff Answers to Pre-Hearing Questions, at 1.

[137] *Id*.

[138] *Id.*

is not a significant change to the plants' risk profile.[139] Further, the Staff stated that granting the exemptions, in its view, did not result in any cumulative impacts.[140]

B. Site-Specific Issues Addressed in the Proceeding

Although our review encompassed the entire application, we discuss here a brief selection of the topics discussed at the hearing and in responses to pre- and post-hearing questions.

1. Toshiba as an Alternate Vendor

Toshiba is referred to as an "alternate vendor" because it is not the entity that obtained the design certification.[141] NINA submitted a due diligence report that provided its assessment evaluating whether Toshiba is qualified to supply the ABWR design for STP Units 3 and 4 under 10 C.F.R. § 52.73(a).[142] As part of its due diligence, NINA identified a number of potential areas of vulnerability for Toshiba and focused its review on those areas.[143] As a result of its evaluation, NINA concluded that Toshiba is qualified to supply the certified design.[144] To confirm NINA's conclusion, the Staff reviewed the due diligence report and conducted a vendor inspection at Toshiba's Isogo Nuclear Engineering Center in Yokohama, Japan.[145] As part of its

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[139] *Id.*

[140] *Id.*

[141] Tr. at 158 (Mr. McIntyre).

[142] *Id.* (Mr. McIntyre).

[143] *Id.* at 170-71 (Mr. Thomas).

[144] *Id.* at 170 (Mr. Thomas).

[145] *Id.* at 158 (Mr. McIntyre); Ex. NRC-008, Safety Evaluation Report, § 1.4S.4, at 1-24; Ex. NRC-014, Staff Presentation Slides—Safety Panel 3 (Nov. 19, 2015), at 11-14.

review, the Staff investigated whether Toshiba had access to engineering documents that are design basis documents for the U.S. ABWR and, if not, whether Toshiba could independently develop the documents.[146] The Staff conducted a comprehensive evaluation of whether Toshiba could support the design as the original design vendor would have; the Staff assessed, among other things, Toshiba's quality assurance program, subcontractor qualification procedures, and corrective action program.[147] In response to a question at the hearing, NINA noted that Toshiba produced references cited in the Design Control Document, as well as design basis calculations requested by NINA, and satisfactorily performed calculations that had to be redone.[148] As both the Staff and NINA noted at the hearing, Toshiba has considerable experience in the design and construction of nuclear power plants and has supplied major portions of the international design of ABWRs currently in operation.[149] The Staff concluded that Toshiba's programs are consistent with 10 C.F.R. Part 50, Appendix B and 10 C.F.R. Part 21 and that Toshiba has the technical ability and access to necessary technical documentation. Therefore, the Staff found Toshiba to be qualified to supply the ABWR certified design under 10 C.F.R. § 52.73(a).[150]

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[146] Tr. at 159, 174 (Mr. McIntyre), 174-75 (Mr. Tai).

[147] Ex. NRC-005-R, Staff Answers to Pre-Hearing Questions, at 4.

[148] Tr. at 172-73 (Mr. Thomas); *see* Ex. NRC-008, Safety Evaluation Report, § 1.4S.4.

[149] Tr. at 33-34, 152-53 (Mr. Head), 160 (Mr. McIntyre).

[150] *Id.* at 161 (Mr. McIntyre).

2. Fukushima Near-Term Task Force Recommendation 4.2—Mitigation Strategies for Beyond-Design-Basis External Events

In SECY-12-0025, the Staff provided the Commission with proposed orders requiring, among other things, mitigation strategies for beyond-design-basis external events to be issued to all power reactor licensees and construction permit holders.[151] At that time, the Staff also indicated its expectation that applications for combined licenses under active review (as the STP application was) would address all Commission-approved Fukushima recommended actions prior to licensing "to the fullest extent practicable."[152] In 2012, the NRC issued Order EA-12-049 requiring all operating reactors to develop and implement strategies to cope without alternating current (AC) power for an indefinite amount of time.[153] The Order required all current license holders to use a three-phase approach for mitigating beyond-design-basis external events.[154] The initial phase requires the use of installed equipment and resources to maintain or restore core cooling, containment, and spent fuel pool cooling; the transition phase requires providing sufficient portable, onsite equipment and consumables to maintain or restore these functions until offsite resources can be brought in; and the final phase requires using offsite resources to maintain those functions indefinitely.[155] After issuance of Order EA-12-049, the

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[151] *Id.* at 123 (Mr. Nolan); "Proposed Orders and Requests for Information in Response to Lessons Learned from Japan's March 11, 2011, Great Tohoku Earthquake and Tsunami," Commission Paper SECY-12-0025 (Feb. 17, 2012) (ML12039A111) (SECY-12-0025).

[152] SECY-12-0025 at 10-11 (addressing pending and future new reactor design certification and license applications); *see* Tr. at 123 (Mr. Nolan).

[153] Tr. at 123 (Mr. Nolan).

[154] Order EA-12-049 at 4.

[155] *Id.*

Staff issued Interim Staff Guidance JLD-ISG-2012-01, which the Staff used to guide its review of NINA's mitigation strategies for STP Units 3 and 4.[156]

At the hearing, NINA and the Staff both described the mitigation strategies for STP Units 3 and 4.[157] NINA explained that there is no requirement for a transition phase in NINA's FLEX strategy because it can use permanently installed initial phase equipment to support a coping duration of at least thirty-six hours—long enough for final phase offsite equipment to arrive at the site.[158] Nonetheless, the STP site maintains portable onsite equipment that provides defense in depth.[159]

The mitigation strategies for STP Units 3 and 4 include unique design features or approaches to sustain core cooling and enhance the ability of the ABWR certified design to withstand a station blackout event.[160] These features and approaches include: (1) enhanced core cooling and spent fuel pool cooling capabilities; (2) strategic management of power systems that can provide direct current (DC) power supplies for at least thirty-six hours; (3) use of the remote shutdown panel to maximize DC battery service time; (4) capability to access water in the ultimate heat sink for long term core cooling and spent fuel pool cooling; and (5) use of containment overpressure protection to ensure containment integrity.[161]

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[156] Tr. at 124 (Mr. Nolan); "Compliance with Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," JLD-ISG-2012-01, Rev. 0 (2012) (ML12146A014).

[157] Tr. at 119-21 (Mr. Head), 123-26 (Mr. Nolan), 127-28 (Ms. Ray).

[158] *Id.* at 120 (Mr. Head).

[159] *Id.* (Mr. Head).

[160] Ex. NRC-001, Staff Information Paper, at 23.

[161] *Id.* at 23-24.

The Staff reviewed the information provided by NINA using the standards set forth in Order EA-12-049.[162] The Staff proposed a license condition requiring the licensee to develop "an overall integrated plan to maintain or restore core cooling, containment function, and [spent fuel pool] cooling capabilities in the event of a simultaneous loss of all AC power and loss of normal access to the [ultimate heat sink]."[163] This license condition requires the licensee to finalize development of strategies and guidance and specify implementation details.[164] Based on this license condition and the information NINA provided in the application, the Staff concluded that there is reasonable assurance that the application meets the underlying purpose of Order EA-12-049.[165]

3. Flammability Control System

NINA proposed to eliminate the flammability control system from the ABWR certified design for STP Units 3 and 4. The ABWR flammability control system "consists of two redundant hydrogen recombiners located in secondary containment" and "was designed to control the potential buildup of a combustible mixture of hydrogen and oxygen inside the containment during a design basis accident."[166] The Staff approved this departure for STP Units 3 and 4 because the NRC eliminated the requirement to maintain equipment needed to mitigate a design-basis loss of cooling accident hydrogen release, including hydrogen recombiners,

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[162] *Id.* at 24 (citing Order EA-12-049).

[163] *Id.*

[164] Tr. at 128 (Ms. Ray).

[165] Ex. NRC-001, Staff Information Paper, at 24; Ex. NRC-008, Safety Evaluation Report, § 22.2.

[166] Ex. NRC-005-R, Staff Answers to Pre-Hearing Questions, at 8, 9.

when 10 C.F.R. § 50.44 was revised in 2003.[167] The application for STP Units 3 and 4 meets the requirements of 10 C.F.R. § 50.44(c), which applies to water-cooled reactor combined licenses issued after 2003.[168] Under section 50.44(c), reactor containments must "have a capability for ensuring a mixed atmosphere during design-basis and significant beyond design-basis accidents," and license applicants must perform a structural analysis that demonstrates containment structural integrity in the event of an accident that releases "hydrogen generated from 100 percent fuel clad-coolant reaction accompanied by hydrogen burning."[169]

In a pre-hearing question, we noted that section 50.44 was revised because inerted containments provide protection from hydrogen combustion, but the Fukushima event showed that hydrogen combustion events can occur outside the inerted primary containment and cause significant damage to the secondary containment building.[170] We therefore asked whether the possible benefit of the flammability control system in the context of severe accident mitigation and recovery was considered with respect to the system's elimination in STP Units 3 and 4.[171] The Staff responded that studies conducted since the certification of the ABWR design have shown that hydrogen recombiners of the size and quantity included in the ABWR design do not

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[167] *Id.* at 8.

[168] *See* 10 C.F.R. § 50.44(c).

[169] *Id.* §§ 50.44(c)(1) and (5); *see also* Ex. STP-001, NINA Answers to Pre-Hearing Questions, at 9 ("The NINA review of the Fukushima event confirms that the Flammability Control System . . . removed from the primary containment in the ABWR design would not prevent hydrogen combustion in the secondary containment.").

[170] Pre-Hearing Question Order at 6.

[171] *Id.*

provide a safety benefit for severe accidents.[172] The Staff explained that the size of the flammability control system was designed to account for the "combustible buildup of hydrogen and oxygen from a design basis metal water reaction and radiolysis of water during a loss of coolant accident. The severe accident amount of combustible hydrogen is much greater than the design basis assumptions used to size the [flammability control system]."[173] As such, the Staff concluded there was "limited benefit" in retaining the system in support of severe accident mitigation and recovery.[174]

4. Design Basis Flood Above Plant Grade

The Staff conducted a hydrology safety review using several potential flooding scenarios and determined that the most limiting flood would result from an instantaneous breach of the north segment of the main cooling reservoir embankment.[175] NINA concluded that such a breach would result in a probable maximum flood of 38.8 ft (11.8 m) above mean sea level (MSL) and therefore proposed a design basis flood elevation of 40 ft (12.2 m) MSL.[176] The Staff reviewed NINA's analysis and conducted an independent confirmatory analysis.[177] The power

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[172] Ex. NRC-005-R, Staff Answers to Pre-Hearing Questions, at 9.

[173] *Id*.

[174] *Id.*

[175] Ex. NRC-001, Staff Information Paper, at 25-26; Ex. NRC-008, Safety Evaluation Report, §§ 2.4S.4, 2.4S.10.

[176] Ex. NRC-006C, South Texas Project, Units 3 and 4, Combined License Application Rev. 12—Part 2 (Final Safety Analysis Report) Tier 2 (2015), § 2.4S.4, at 2.4S.4-1, 2.4S.4-20 (ML15124A421); Ex. NRC-001, Staff Information Paper, at 26.

[177] Ex. NRC-001, Staff Information Paper, at 26.

block of STP Units 3 and 4 is 34 ft (10.36 m) MSL.[178] Consequently, the design basis flood is approximately 6 ft (1.83 m) above the grade of the power block.[179] The Staff evaluated this proposal and concluded that the safety-related facilities will remain free from flooding.[180]

An NRC staff member did not concur with the Staff's hydrological conclusions, specifically with respect to determining the design basis flood level and maximum groundwater level.[181] These site parameters are important for structural design and protecting safety-related facilities from flooding.[182] The non-concurrence stated that the design basis flood level was not determined accurately nor conservatively in either NINA's application or the Staff's Safety Evaluation Report.[183] To resolve the issues raised by the non-concurrence, the Staff solicited independent expert reviewers from the University of Maryland, the U.S. Army Corps of Engineers, the U.S. Bureau of Reclamation, Virginia Polytechnic Institute and State University, Taylor Engineering Research Institute (University of North Florida), and the University of North Carolina.[184] The independent review panel concluded that all the technical issues were resolved

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[178] Ex. NRC-006C, Final Safety Analysis Report, § 2.4S.4, at 2.4S.4-1; Ex. NRC-001, Staff Information Paper, at 25.

[179] Ex. NRC-001, Staff Information Paper, at 26; Tr. at 151-52 (Mr. Head).

[180] Ex. NRC-001, Staff Information Paper, at 26; Ex. NRC-008, Safety Evaluation Report, §§ 2.4S.4, 2.4S.10.

[181] Ex. NRC-001, Staff Information Paper, at 27; *see* Non-Concurrence Process Record for NCP-2011-014 (Dec. 13, 2012) (ML12348A249).

[182] Ex. NRC-001, Staff Information Paper, at 27.

[183] *Id.* The individual asserted that the errors related to the design basis flood level resulted in several regulatory requirements not being met—10 C.F.R. § 52.79(a)(1)(iii); General Design Criterion 2, "Design bases for protection against natural phenomena," of 10 C.F.R. Part 50, Appendix A; and 10 C.F.R. § 100.20(c)(3). *Id.*

[184] *Id.*

correctly by the Staff.[185] In addition, the ACRS reviewed the non-concurrence as part of the ABWR Subcommittee's review of the STP Units 3 and 4 combined license application; the non-concurring individual made a presentation before the ACRS Subcommittee.[186] The ACRS concurred with the Staff's conclusions from its review of the site hydrology.[187]

Prior to the uncontested hearing, the non-concurring individual sent us a statement of technical concerns related to determining the design basis flood level for the STP combined license application.[188] The statement was served on the parties, and we have reviewed it. At the hearing, the Staff indicated that it had reviewed the statement, determined that the statement did not add anything new to the non-concurrence, and maintained its position, documented in the Safety Evaluation Report, on the design basis flood level.[189] Similarly, NINA reviewed the statement and indicated that the statement did not alter its analysis or conclusions on the design basis flood level for the site.[190]

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[185] *Id.*

[186] *Id.* at 28.

[187] *Id.*; ACRS Letter at 6.

[188] Memorandum from Emile Julian, Office of the Secretary, NRC, to NINA and the Staff (Nov. 12, 2015) (ML15316A848) (serving on the parties an email forwarding "Technical Concerns Regarding the Uncontested Hearing for Issuance of Combined Licenses for the South Texas Project Units 3 and 4, SECY 15-0123" (Nov. 2, 2015)).

[189] Tr. at 167 (Dr. Jones), 169 (Mr. Flanders).

[190] *Id.* at 168 (Mr. Head).

5. NRC Bulletin 2012-01—Electric Power System

Our regulations require the use of onsite and offsite electric power systems that permit the functioning of structures, systems, and components important to safety.[191] In Bulletin 2012-01, the NRC requested information about operating facilities' electric power system designs, in response to the loss of one of the three phases of the offsite power circuit (known as a single-phase open circuit condition) at Byron Station, Unit 2.[192] The Byron event led to identification of a design vulnerability in the protection scheme for certain engineered safety features buses. The Bulletin was issued to notify plants of the design vulnerability and the potential impact on safety-related equipment.[193] "The [S]taff was concerned that an undervoltage condition due to a loss of phase event could damage engineered safety features equipment and actuate protective devices."[194] To address this vulnerability, when one or more phases in the three phase offsite power system is lost, reactors with active safety systems, such as STP Units 3 and 4, should (1) detect an offsite power system open-phase circuit condition on the high voltage side of the main power transformer under all loading and operating configurations; (2) activate an alarm in the main control room; and (3) provide automatic mitigation and response to the event.[195] The Staff determined that these steps would ensure that AC power, with adequate capacity and capability, is available to safety-related equipment to

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[191] 10 C.F.R. pt. 50, app. A (General Design Criterion 17), § 50.55a(h)(3).

[192] Bulletin 2012-01 at 1. NINA addressed the issues raised in the Bulletin in several responses to requests for additional information. Ex. NRC-008, Safety Evaluation Report, § 8.2S, at 8-36.

[193] Tr. at 129 (Ms. Ray).

[194] Ex. NRC-001, Staff Information Paper, at 28.

[195] *Id.* at 29; Tr. at 129-30 (Ms. Ray); Ex. NRC-008, Safety Evaluation Report, § 8.2S.

meet its intended safety function.[196]

NINA is the first combined license applicant to resolve the open phase issue discussed in Bulletin 2012-01 for an active design.[197] The Staff found NINA's solution acceptable because it provides features for detection and alarm in addition to automatically protecting safety-related equipment.[198] The Staff further determined that NINA's solution prevents safety-related or non-safety-related loads from exceeding their ratings, which could damage equipment.[199] The Staff noted that NINA has added ITAAC and technical specification surveillance requirements, as well as committed to developing procedures and training, to address implementation of this solution.[200] The Staff concluded that the design meets the requirements in General Design Criterion 17 and 10 C.F.R. § 50.55a(h)(3).[201]

6. Reactor Vessel Material Surveillance Program

The material surveillance program collects data used to establish the conditions under which the reactor vessel can be operated with adequate margins of safety against fracture throughout its service life. Unless the reactor vessel meets the criteria of Part 50, Appendix H,

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[196] Ex. NRC-001, Staff Information Paper, at 29; Tr. at 130 (Ms. Ray); Ex. NRC-008, Safety Evaluation Report, § 8.2S.

[197] Ex. NRC-001, Staff Information Paper, at 29; Tr. at 130 (Ms. Ray).

[198] Ex. NRC-001, Staff Information Paper, at 29; Tr. at 130 (Ms. Ray); Ex. NRC-008, Safety Evaluation Report, § 8.2S.

[199] Ex. NRC-001, Staff Information Paper, at 29; Tr. at 130-31 (Ms. Ray); Ex. NRC-008, Safety Evaluation Report, § 8.2S.

[200] Ex. NRC-001, Staff Information Paper, at 29; Tr. at 131 (Ms. Ray); Ex. NRC-008, Safety Evaluation Report, § 8.2S.

[201] Ex. NRC-001, Staff Information Paper, at 29; Tr. at 131 (Ms. Ray); Ex. NRC-008, Safety Evaluation Report, § 8.2S.

Section III.A, licensees must monitor the reactor pressure vessel beltline materials through a surveillance program that complies with ASTM E 185-82, as modified by Part 50, Appendix H.[202] Accordingly, NINA has proposed a surveillance program for STP Units 3 and 4. The surveillance program is based on the testing of material specimens that are stored in surveillance capsules inside the reactor pressure vessel and periodically withdrawn from the vessel on an NRC-approved schedule.[203] Licensees analyze the material specimens to evaluate changes, due to neutron irradiation and high temperatures, in the fracture toughness properties of the ferritic materials in the reactor vessel beltline region.[204]

The Design Control Document for the ABWR specifies the minimum number of capsules to be included in the ABWR (four) and provides a sample withdrawal schedule that is different from the schedule included in the ASTM standard.[205] Further, the Design Control Document directs a combined license applicant to identify the withdrawal schedule for each surveillance capsule as part of its combined license application.[206] This direction is consistent with 10 C.F.R. Part 50, Appendix H, which requires applicants to submit a proposed withdrawal schedule with a technical justification.[207]

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[202] 10 C.F.R. pt. 50, app. H, § III.B; ASTM E 185-82, *Standard Practice for Conducting Surveillance Tests for Light-Water Cooled Nuclear Power Reactor Vessels* (1982) (ASTM E 185-82).

[203] 10 C.F.R. pt. 50, app. H, § III.B.3.

[204] *Id.*

[205] *See* ABWR Design Control Document, Tier 2, § 5.3.1.6.1.

[206] *Id.* § 5.3.4.2 at 5.3-19.

[207] 10 C.F.R. pt. 50, app. H, § III.B.3.

By way of background, in its review of the draft Design Control Document, the Staff noted that the applicant, GE, had only included three capsules in the proposed design.[208] The Staff requested that GE update the number of capsules in the design to accommodate a sixty-year service life.[209] GE did so, and the Staff approved the revision to include four capsules.[210] But the Staff did not approve a withdrawal schedule for the capsules. Instead, the ABWR Design Control Document indicates that a combined license applicant will provide a withdrawal schedule for each capsule as part of its license application. The schedule reflected in the Design Control Document is not part of the certified design and, as such, is subject to review as part of the combined license application.

In its application, NINA submitted a proposed withdrawal schedule for each unit that is identical to the sample schedule in the Design Control Document, but differs from the withdrawal schedule presented in Table 1 of ASTM E 185-82.[211] But NINA did not provide a technical justification for the use of this schedule, nor has the Staff analyzed the proposed schedule to verify its compliance with 10 C.F.R. Part 50, Appendix H.[212]

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[208] "Final Safety Evaluation Report Related to the Certification of the Advanced Boiling Water Reactor Design, Main Report," NUREG-1503, (July 1994), § 5.3.1, at 5-16 (ML080670592).

[209] *Id.*

[210] *Id.* at 5-16 to 5-17. Although initial reactor licenses are issued for forty years, sufficient surveillance capsules must be included to provide for an effective surveillance program for the design life of the facility, which, in this instance, is sixty years. *See id.*

[211] *See* Ex. NRC-006H, South Texas Project, Units 3 and 4, Combined License Application Rev. 12—Part 2 (Final Safety Analysis Report) Tier 2 (2015), § 5.3.1.6.1 at 5.3-2; § 5.3.4.2 at 5.3-5 (ML15124A421); ABWR Design Control Document, Tier 2, § 5.3.1.6.1; ASTM E 185-82 at Table 1, "Minimum Recommended Number of Surveillance Capsules and Their Withdrawal Schedule (Schedule in Terms of Effective Full-Power Years of the Reactor Vessel)."

[212] *See* Tr. at 176-77; Ex. NRC-016, *NRC Staff Responses to Commission Post-Hearing Questions* (Dec. 7, 2015), at 2-3 (Staff Answers to Post-Hearing Questions); Ex. STP-016,

After our review of the proposed capsule withdrawal schedule, we note the dissimilarity between NINA's proposed schedule and that in the ASTM standard, and the absence of a clear justification for the proposed alternative schedule. Based on our review of the record and the relevant requirements, we find that a license condition directing the use of the specified schedule in the ASTM standard is appropriate here. While NINA's proposed schedule does not present an immediate safety concern, we direct the Staff to include a condition in each combined license to require the use of the withdrawal schedule provided in Table 1 of ASTM E 185-82 for a three-capsule program in the initial forty-year licensing period (that is, withdrawal of capsules at 6 effective full power years, 15 effective full power years, and at a time where the neutron fluence is between one and two times the expected end-of-life fluence for the reactor pressure vessel).[213] Consistent with the certified design, a fourth capsule would be reserved for a potential period of extended operation.

We note one other matter with respect to the reactor vessel material surveillance program. Sections 7.3.1 and 8.2.1 of ASTM E 185-82, which are incorporated by reference in 10 C.F.R. Part 50, Appendix H, provide criteria for dosimetry testing and require testing of dosimeters located inside of the capsules in accordance with ASTM Guide E 482. In its

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NINA's Responses to Post-Hearing Questions (Dec. 3, 2015), at 3-4 (NINA Answers to Post-Hearing Questions).

[213] Table 1 of the ASTM standard provides that the first and second capsules may need to be withdrawn earlier than the specified times depending on other factors, but these other factors would not apply to STP. *See* Ex. NRC-016, Staff Answers to Post-Hearing Questions, at 2.

We have not ourselves evaluated the technical merits of the proposed schedule in NINA's combined license application. NINA is free to submit a license amendment request seeking to remove the license condition and to use an alternate withdrawal schedule accompanied by a technical justification, which can be evaluated by the Staff.

response to a post-hearing question on the proposed neutron dosimetry testing program, NINA indicated that it would not perform any testing of dosimeters located inside of the surveillance capsules because the linear relationship between fluence and power output precludes the need for such testing.[214] NINA's position is inconsistent with ASTM E 185-82, which is incorporated by reference into our regulations, as noted above. The ASTM standard and, by extension, our regulations require licensees to test dosimeters located inside of the surveillance capsules. We expect the Staff to ensure that the licensee implements an appropriate surveillance program, taking into account the internal dosimetry requirements, as part of its regular oversight of reactor operations.

7. Knowledge Management

It is uncertain when, if at all, construction of STP Units 3 and 4 would begin after issuance of the licenses.[215] At the hearing, we explored NINA's plans to maintain the knowledge gained during the combined license review, should NINA wait for an extended period of time to begin construction.[216] Specifically, we asked about NINA's plans for knowledge management and transfer to ensure that it remains technically qualified to construct and operate the units.[217] Mr. McBurnett explained that Toshiba, the vendor for the project, has extensive knowledge and experience in the construction and maintenance of ABWRs (with several under

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[214] NINA Answers to Post-Hearing Questions at 2; Post-Hearing Questions Order at 2.

[215] *See, e.g.*, Tr. at 111 (Chairman Burns).

[216] *Id.* at 111-13.

[217] *Id.* at 111 (Chairman Burns).

construction and others now operating in Japan).[218] Additionally, Mr. McBurnett stated that NINA is working to ensure that it maintains its records and documents in an organized, searchable fashion, developing expertise within the project, and maintaining contact with the people who have worked on the project over the years.[219]

8. Environmental Issues

The proposed site is co-located with existing STP Units 1 and 2 and would use much of the existing infrastructure.[220] As detailed in the FEIS, the impacts from building and operating the proposed units would be small for almost all resource areas.[221] The Staff's environmental review considered information from NINA's Environmental Report; consultation with federal, state, tribal, and local agencies; the Staff's independent review; and the Staff's consideration of comments received during the public scoping process and the comment period on the draft EIS.[222] The Staff did not identify any novel issues with respect to the environmental review for STP Units 3 and 4.[223] In addition, in response to our question at the hearing, the Staff stated that NINA did not take any novel approaches to its impact assessments of resource areas.[224]

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[218] *Id.* at 111-12 (Mr. McBurnett).

[219] *Id.* at 112 (Mr. McBurnett).

[220] *Id*. at 188 (Ms. Vokoun).

[221] *Id*. at 191 (Ms. Vokoun).

[222] *Id*. at 197 (Ms. Vokoun). "The [S]taff addressed 378 individual comments extracted from the meeting transcripts, letters, and emails." Ex. NRC-005-R, Staff Answers to Pre-Hearing Questions, at 42.

[223] Ex. NRC-001, Staff Information Paper, at 30.

[224] Tr. at 198 (Ms. Vokoun).

The FEIS was completed in 2011, while the Staff was still conducting its safety review of the application.[225] Under 10 C.F.R. § 51.92, the Staff must supplement a FEIS if there are substantial changes in the proposed action that are relevant to environmental concerns or if there are new and significant circumstances or information relevant to environmental concerns that bear on the proposed action or its impacts. Accordingly, after publication of the FEIS, the Staff followed its process for consideration of new information to determine whether a supplement might be needed.[226] The Staff's process included an audit, conducted in February 2015, of NINA's process for identifying and assessing new information.[227] The Staff concluded that the new information did not present a seriously different picture of the environmental impacts of constructing and operating STP Units 3 and 4 when compared to the impacts described in the FEIS and that supplementation was not required.[228]

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[225] *Id*. at 196 (Ms. Vokoun).

[226] *Id*. (Ms. Vokoun); Ex. NRC-005-R, Staff Answers to Pre-Hearing Questions, at 39 (citing "Staff Process for Determining if a Supplement to an Environmental Impact Statement is Required in Accordance with Title 10 of the *Code of Federal Regulations*, Part 51.92(a) or 51.72(a)" (ML13199A170)).

[227] Tr. at 196 (Ms. Vokoun); Ex. NRC-005-R, Staff Answers to Pre-Hearing Questions, at 39-40 (citing Memorandum from Mark D. Notich, Sr. Project Manager, NRC to Jennifer L. Dixon-Herrity, Environmental Projects Branch Chief, NRC (Apr. 15, 2015) (ML15040A372) (providing summary report of the audit results of NINA's process for identifying new and potentially significant information)); *see also supra* at 13-14 & n.48 (regarding the Staff's consideration of the Continued Storage Rule and associated GEIS as potentially new and significant information).

[228] Ex. NRC-005-R, Staff Answers to Pre-Hearing Questions, at 40. Since the FEIS was completed, one new bird species has been federally listed as threatened under the Endangered Species Act and potentially occurs in the landscape surrounding the STP site—the rufa red knot (*Calidrus canutus rufa*). *Id.* at 45. Based on the review of information provided by experts from NINA and the U.S. Army Corps of Engineers, the Staff concluded that the STP project would not affect the rufa red knot, as it is a shorebird and the STP site does not provide, and is some distance from, its preferred habitat—beachfront and shores. *Id.* Because the Staff concludes

In pre-hearing questions and at the hearing, we explored the possible impacts of recent drought conditions in the area of the STP site.[229] NINA noted that drought conditions are not uncommon in Texas and were considered during the original design of the STP site.[230] Further, the "site was originally designed to accommodate four operating units and the Main Cooling Reservoir (MCR) was sized accordingly. Also, sufficient senior water rights were procured to ensure that four units could operate even under severe drought conditions."[231] NINA represented that it does not anticipate the need for any new water appropriations to support STP Units 3 and 4.[232] In part because of its ability to operate during severe drought conditions, NINA asserts that the STP site remains the obviously superior site even when recent drought conditions are considered.[233] Similarly, the Staff recognized that Texas experiences frequent droughts and considered the drought of record that occurred in the 1950s and was discussed in

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there would be no effect on the species, the Staff is not required to seek concurrence from the U.S. Fish and Wildlife Service or take further action under the Endangered Species Act. *Id.*

[229] *See* Ex. NRC-005-R, Staff Answers to Pre-Hearing Questions, at 42-44; Ex. STP-001, NINA Answers to Pre-Hearing Questions, at 44-45; Tr. at 199-200, 202-07. The Staff recognized that 2011 was the driest year on record for Texas and the State remained in severe drought condition from late 2010 until recently. Ex. NRC-005-R, Staff Answers to Pre-Hearing Questions, at 42.

[230] Ex. STP-001, NINA Answers to Pre-Hearing Questions, at 44.

[231] *Id.*

[232] *Id.*

[233] *Id.*

the FEIS.[234] Because the recent severe drought was bounded by the earlier drought of record, the Staff's impact evaluation in the FEIS did not change based on the recent drought.[235]

We also asked whether the recent drought conditions impacted any of the FEIS conclusions related to terrestrial ecological impacts.[236] Both NINA and the Staff reiterated that droughts are not uncommon in the area, and that the recent drought was not as severe as the drought of record discussed in the FEIS.[237] NINA further noted that the proposed location for STP Units 3 and 4 consists mainly of areas that do not offer particularly attractive habitat to the terrestrial species that inhabit the site.[238] Similarly, the Staff responded that the plants and wildlife on the site are expected to be broadly tolerant of extreme environmental conditions such as droughts, but also that loss or degradation of these resources would only be of minimal ecological significance.[239] Therefore, although the Staff did not perform a separate analysis of the impacts of the recent drought on terrestrial ecological resources, the Staff does not expect that any of the impact determinations would have changed.[240]

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[234] Ex. NRC-005-R, Staff Answers to Pre-Hearing Questions, at 42.

[235] *Id.*

[236] Pre-Hearing Questions Order at 27.

[237] Ex. STP-001, NINA Answers to Pre-Hearing Questions, at 45; Ex. NRC-005-R, Staff Answers to Pre-Hearing Questions, at 43.

[238] Ex. STP-001, NINA Answers to Pre-Hearing Questions, at 45.

[239] Ex. NRC-005-R, Staff Answers to Pre-Hearing Questions, at 43.

[240] *Id.*

C. Findings

We have conducted an independent review of the sufficiency of the Staff's safety findings, with particular attention to the topics discussed above. Our findings, however, are based on the entire record. Based on the evidence presented in the uncontested hearing, including the Staff's review documents and the testimony provided, we find that the applicable standards and requirements of the AEA and the NRC regulations have been met. The required notifications to other agencies or bodies have been duly made.[241] NINA is technically and financially qualified to engage in the activities authorized. We find that there is reasonable assurance that the facility will be constructed and operated in conformity with the licenses, the provisions of the AEA, and the NRC's regulations and that issuance of the licenses will not be inimical to the common defense and security or to the health and safety of the public. In addition, we find that the Staff's proposed regulatory exemptions meet the standards in 10 C.F.R. § 50.12. And finally, we find that the Staff's proposed license conditions as well as the license condition we direct the Staff to include, discussed in Section II.B.6 above, are

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[241] The Staff notified the Electric Reliability Council of Texas, the Public Utility Commission of Texas, and the Federal Energy Regulatory Commission about the combined license application in May 2015. Ex. NRC-001, Staff Information Paper, at 30 (citing Letter from Tom Tai, NRC, to Craven Crowell, Electric Reliability Council of Texas (May 5, 2015) (ML15085A440); Letter from Tom Tai, NRC, to Brian Almon, Public Utility Commission of Texas (May 5, 2015) (ML15085A370); Letter from Tom Tai, NRC, to Kimberly Bose, Federal Energy Regulatory Commission (May 5, 2015) (ML15085A430)). The Staff published notices of the application in advance of public EIS scoping meetings on January 27, 2008, and February 3, 2008, in the *Bay City Tribune* and *Victoria Advocate*. *Id.* Notices of the combined license application were also published in advance of public meetings on the draft EIS on April 25, 2010, May 2, 2010, and May 5, 2010, in the same papers. *Id.* at 30-31. In addition, pursuant to 10 C.F.R. § 50.43(a)(3), the Staff published a notice of the application in the *Federal Register* on April 23, 2015; April 28, 2015; May 6, 2015; and May 12, 2015 (at 80 Fed. Reg. 22,746; 80 Fed. Reg. 23,597; 80 Fed. Reg. 26,104; and 80 Fed. Reg. 27,190, respectively). *Id.* at 31.

appropriately drawn and sufficient to provide reasonable assurance of adequate protection of public health and safety.

We also conducted an independent review of the Staff's environmental analysis in the FEIS, taking into account the particular requirements of NEPA. NEPA section 102(2)(A) requires agencies to use "a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts" in decision-making that may impact the environment.[242] We find that the environmental review team used the systematic, interdisciplinary approach that NEPA requires.[243] The environmental review team consisted of more than sixty individuals with expertise in disciplines including ecology, geology, hydrology, radiological health, socioeconomics, and cultural resources.[244]

NEPA section 102(2)(E) calls for agencies to study, develop, and describe appropriate alternatives.[245] The alternatives analysis is the "heart of the environmental impact statement."[246] Based on the discussion in the FEIS and the Staff's testimony at the hearing, we find that the environmental review identified an appropriate range of alternatives with respect to alternative power sources, alternative sites, and alternative system designs and adequately described the

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[242] NEPA § 102(2)(A), 42 U.S.C. § 4332(2)(A).

[243] *See, e.g.*, Tr. at 188-91 (Ms. Vokoun) (providing an overview of the Staff's environmental review methodology); Ex. NRC-015, Staff Presentation Slides—Environmental Panel (Nov. 19, 2015), at 3-6, 9-11.

[244] *See* Ex. NRC-010B, FEIS, app. A. The team consisted of individuals from the NRC, the U.S. Army Corps of Engineers, Pacific Northwest National Laboratory, and Idaho National Laboratory. *Id.*

[245] NEPA § 102(2)(E), 42 U.S.C. § 4332(2)(E).

[246] 10 C.F.R. pt. 51, app. A, § 5.

environmental impacts of each alternative.[247] We find reasonable the Staff's conclusion that none of the alternatives considered is environmentally preferable to the proposed action.[248]

NEPA section 102(2)(C) requires us to assess the relationship between local short-term uses and long-term productivity of the environment, to consider alternatives, and to describe the unavoidable adverse environmental impacts and the irreversible and irretrievable commitments of resources associated with the proposed action.[249] The discussion of alternatives is in Chapter 9 of the FEIS; the other items are discussed in Chapter 10.[250] The review team found the principal short-term benefit of the project to be the production of electrical energy.[251] The review team also found that the site would have much greater economic productivity hosting the reactors than it would if used for agriculture or other probable uses of the site.[252] While the review team noted there would be an impact to long-term productivity when the plant is not immediately dismantled at the end of operation, the team found that "the enhancement of regional productivity resulting from the electrical energy produced by the plant is expected to

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[247] *See, e.g.*, Tr. at 193-95 (Mr. Kugler); Ex. NRC-010A, FEIS, ch. 9.

[248] *See, e.g.*, Tr. at 195 (Mr. Kugler); Ex. NRC-010A, FEIS, § 9.2, at 9-31, 9-33; § 9.3, at 9-207; § 9.4, at 9-215.

[249] NEPA § 102(2)(C)(ii)-(v), 42 U.S.C. § 4332(2)(C)(ii)-(v).

[250] *See* Ex. NRC-010A, FEIS, chs. 9-10.

[251] *Id.*, § 10.3, at 10-13.

[252] *Id.,* § 10.3, at 10-13 to 10-14.

result in a correspondingly large increase in regional long-term productivity that would not be equaled by any other long-term use of the site."[253]

Chapter 10 of the FEIS includes tables listing the unavoidable adverse environmental impacts during preconstruction, construction, and operation, along with actions to mitigate those impacts.[254] The review team found that the unavoidable impacts during preconstruction and construction would be small for all resource areas except for socioeconomic impacts—physical impacts, demography, economic impacts, and community services and infrastructure—which would be small to moderate.[255] The impact for economics would be beneficial.[256] For operation, the review team found that the unavoidable adverse impacts would be small for all resource areas except economics, where the impacts would be beneficial and small to large.[257]

Finally, with regard to irreversible and irretrievable commitments of resources, the review team concluded that disposal of radioactive and nonradioactive wastes would require the long-term or irreversible commitment of land and over 22,000 gallons per minute (83,279 liters per minute) of cooling water would be lost through evaporation during operation.[258] While there would be both temporary and long-term changes to the abundance and distribution of terrestrial biota at the site, there is enough suitable habitat elsewhere in the area such that changes would

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[253] *Id.* at 10-14. The review team also noted that "most long-term impacts resulting from land-use preemption by plant structures can be eliminated by removing these structures or by converting them to other productive uses." *Id.*

[254] *Id.* at Tables 10-1 and 10-2.

[255] *Id.* at Table 10-1.

[256] *Id.*

[257] *Id.* at Table 10-2.

[258] *Id.* §§ 10.4.1.1 and 10.4.1.2.

not result in adverse impacts to the regional populations despite localized permanent loss of habitat.[259] With respect to aquatic biota, the review team expects preconstruction, construction, and operation to adversely affect the abundance and distribution of the aquatic community, including designated essential fish habitat in certain areas of the Colorado River.[260] The review team predicts that activities related to STP Units 3 and 4 would have more than minimal but less than substantial adverse effect on essential fish habitat in the Colorado River.[261] The review team expects that the aquatic habitat and populations would recover after Units 3 and 4 permanently cease operations and the plant is decommissioned.[262] The review team also concluded that during the construction of Units 3 and 4, the materials used and energy consumed, "while irretrievable, would be of small consequence with respect to the availability of such resources."[263] With regard to operation of the proposed units, the review team determined that uranium would be irretrievably committed, but it would be negligible in comparison to the availability of uranium ore and existing stockpiles of highly enriched uranium in the United States and Russia that could be processed into fuel.[264]

We must weigh these unavoidable adverse environmental impacts and resource commitments—the environmental "costs" of the project—against the project's benefits.[265] Considering the need for power in the region and the expected increase in productivity, jobs,

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[259] *Id.* § 10.4.1.3.

[260] *Id.*

[261] *Id.*

[262] *Id.*

[263] *Id.* § 10.4.2.

[264] *Id.*

[265] 10 C.F.R. § 51.107(a).

and tax revenue as described in the hearing and in the FEIS, we find that the benefits of the project outweigh the costs described above. Moreover, we have considered each of the requirements of NEPA section 102(2)(C) and find nothing in the record that would lead us to disturb the Staff's conclusions on those requirements.

In sum, for each of the environmental topics discussed at the hearing and in this decision, we find that the Staff's review was reasonably supported in logic and fact and sufficient to support the Staff's conclusions. Based on our review of the FEIS, we also find that the remainder of the FEIS was reasonably supported and sufficient to support the Staff's conclusions.

Therefore, as a result of our review of the FEIS environmental analysis, and in accordance with the Notice of Hearing for this uncontested proceeding, we find that the requirements of NEPA section 102(2)(A), (C), and (E), and the applicable regulations in 10 C.F.R. Part 51, have been satisfied with respect to the combined license application. We independently considered the final balance among conflicting factors contained in the record of this proceeding. We find, after weighing the environmental, economic, technical, and other benefits against environmental and other costs, and considering reasonable alternatives, that the combined licenses should be issued.

III. CONCLUSION

We find that, with respect to the safety and environmental issues before us today, the Staff's review of NINA's combined license application was sufficient to support the findings in 10 C.F.R. §§ 52.97(a) and 51.107(a). We *authorize* the Director of the Office of New Reactors to issue the combined licenses for the construction and operation of South Texas Project Units 3 and 4 subject to the directions and modifications contained herein.[266] We *authorize* the Staff to issue the record of decision.

IT IS SO ORDERED.

For the Commission

NRC SEAL

/RA/

_____
Annette L. Vietti-Cook
Secretary of the Commission

Dated at Rockville, Maryland,
this 9th day of February 2016.

[266] *See supra* section II.B.6.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
NUCLEAR INNOVATION NORTH AMERICA, LLC	)	Docket Nos. 52-012-COL and 52-013-COL
	)	
	)	
(South Texas Project, Units 3 and 4)	)	
(Mandatory Hearing)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing **COMMISSION MEMORANDUM AND ORDER CLI-16-02** have been served upon the following persons by the Electronic Information Exchange.

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[Original signed by Herald M. Speiser]
Office of the Secretary of the Commission

Dated at Rockville, Maryland
this 9th day of February, 2016

seq.) by, among other things, promoting the use of the Internet and other information technologies and providing increased opportunities for citizen access to Government information and services, and for other purposes.

Executive Order 12988

This final rule has been reviewed under Executive Order 12988, Civil Justice Reform. Under this rule: (1) All State and local laws and regulations that are inconsistent with this rule will be preempted; (2) no retroactive effect will be given to this rule; and (3) no retroactive proceedings will be required before parties may file suit in court challenging this rule.

Executive Order 13175

This final rule has been reviewed in accordance with the requirements of Executive Order 13175, Consultation and Coordination with Indian Tribal Governments. The review reveals that this regulation will not have substantial and direct effects on Tribal governments and will not have significant Tribal implications.

Additional Public Notification

FSIS will announce this notice online through the FSIS Web page located at *http://www.fsis.usda.gov/wps/portal/fsis/topics/regulations/federal-register.*

FSIS will also make copies of this **Federal Register** publication available through the FSIS Constituent Update, which is used to provide information regarding FSIS policies, procedures, regulations, **Federal Register** notices, FSIS public meetings, and other types of information that could affect or would be of interest to constituents and stakeholders. The Update is communicated via Listserv, a free electronic mail subscription service for industry, trade groups, consumer interest groups, health professionals, and other individuals who have asked to be included. The Update is also available on the FSIS Web page. In addition, FSIS offers an electronic mail subscription service which provides automatic and customized access to selected food safety news and information. This service is available at *http://www.fsis.usda.gov/wps/portal/fsis/programs-and-services/email-subscription-service.* Options range from recalls to export information to regulations, directives, and notices. Customers can add or delete subscriptions themselves, and have the option to password protect their accounts.

USDA Nondiscrimination Statement

No agency, officer, or employee of the USDA shall, on the grounds of race, color, national origin, religion, sex, gender identity, sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, or political beliefs, exclude from participation in, deny the benefits of, or subject to discrimination any person in the United States under any program or activity conducted by the USDA.

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To file a complaint of discrimination, complete the USDA Program Discrimination Complaint Form, which may be accessed online at *http://www.ocio.usda.gov/sites/default/files/docs/2012/Complain_combined_6_8_12.pdf,* or write a letter signed by you or your authorized representative. Send your completed complaint form or letter to USDA by mail, fax, or email:

Mail: U.S. Department of Agriculture Director, Office of Adjudication, 1400 Independence Avenue SW., Washington, DC 20250–9410.

Fax: (202) 690–7442.

Email: *program.intake@usda.gov.*

Persons with disabilities who require alternative means for communication (Braille, large print, audiotape, etc.), should contact USDA's TARGET Center at (202) 720–2600 (voice and TDD).

List of Subjects in 9 CFR Part 391

Fees and charges.

For the reasons discussed in the preamble, FSIS amends 9 CFR Chapter III as follows:

PART 391—FEES AND CHARGES FOR INSPECTION AND LABORATORY ACCREDITATION

■ 1. The authority citation for part 391 continues to read as follows:

Authority: 7 U.S.C. 138d, 7 U.S.C. 1622, 1627, and 2219a; 21 U.S.C. 451 *et seq.;* 21 U.S.C. 601–695.

■ 2. Revise paragraph (a) of § 391.5 to read as follows:

§ 391.5 Laboratory accreditation fee.

(a) The annual fee for the accreditation and maintenance of accreditation provided pursuant to § 439.5 of this chapter shall be $5,000 for the first analyte class, $2,900 for the second analyte class, and $2,100 for each additional analyte class.

* * * * *

Done at Washington, DC, on September 11, 2014.

Alfred Almanza,

Administrator.

[FR Doc. 2014–22208 Filed 9–18–14; 8:45 am]

BILLING CODE 3410–DM–P

NUCLEAR REGULATORY COMMISSION

10 CFR Part 51

[NRC–2012–0246]

RIN 3150–AJ20

Continued Storage of Spent Nuclear Fuel

AGENCY: Nuclear Regulatory Commission.

ACTION: Final rule.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is revising its generic determination regarding the environmental impacts of the continued storage of spent nuclear fuel beyond a reactor's licensed life for operation and prior to ultimate disposal. The NRC prepared a final generic environmental impact statement that provides a regulatory basis for this final rule. The Commission concludes that the generic environmental impact statement generically determines the environmental impacts of continued storage of spent nuclear fuel beyond the licensed life for operation of a reactor. The final rule also clarifies that the generic determination applies to license renewal for an independent spent fuel storage installation (ISFSI), reactor construction permits, and early site permits. The final rule clarifies how the generic determination will be used in future NRC environmental reviews, and makes changes to improve readability. Finally, the final rule makes conforming amendments to the determinations on the environmental effects of renewing the operating license of a nuclear power plant to address issues related to the onsite storage of spent nuclear fuel and offsite radiological impacts of spent nuclear fuel and high-level waste disposal.

DATES: This final rule is effective on October 20, 2014.

ADDRESSES: Please refer to Docket ID NRC–2012–0246 when contacting the NRC about the availability of information for this final rule. You may access publicly-available information related to this final rule by any of the following methods:

- *Federal Rulemaking Web site:* Go to *http://www.regulations.gov* and search

for Docket ID NRC–2012–0246. Address questions about NRC dockets to Carol Gallagher; telephone: 301–287–3422; email: *Carol.Gallagher@nrc.gov.* For technical questions, contact the individual listed in the **FOR FURTHER INFORMATION CONTACT** section of this final rule.

- *NRC's Agencywide Documents Access and Management System (ADAMS):* You may obtain publicly available documents online in the ADAMS Public Documents collection at *http://www.nrc.gov/reading-rm/adams.html.* To begin the search, select *''ADAMS Public Documents''* and then select ''Begin Web-based ADAMS Search.'' For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1–800–397–4209, at 301–415–4737, or by email to *pdr.resource@nrc.gov.* The ADAMS accession number for each document referenced in this final rule (if that document is available in ADAMS) is provided the first time that it is mentioned in the **SUPPLEMENTARY INFORMATION** section. In addition, for the convenience of the reader, the ADAMS accession numbers are provided in a table in the ''Availability of Documents'' section of this document.
- *NRC's PDR:* You may examine and purchase copies of public documents at the NRC's PDR, Room O1–F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

FOR FURTHER INFORMATION CONTACT: Merri Horn, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; telephone: 301–287–9167; email: *Merri.Horn@nrc.gov.*

SUPPLEMENTARY INFORMATION:

Executive Summary

A. Need for the Regulatory Action

The purpose of this final rule (rule) is to preserve the efficiency of the NRC's licensing process by adopting into the NRC's regulations the Commission's generic determinations of the environmental impacts of the continued storage of spent nuclear fuel (spent fuel) beyond the licensed life for operations of a reactor (continued storage). The NRC has prepared a final generic environmental impact statement that addresses the environmental impacts of continued storage and provides a regulatory basis for this rule. This rule codifies the results of the analyses from the generic environmental impact statement in § 51.23 of Title 10 of the *Code of Federal Regulations* (10 CFR), ''Environmental impacts of continued storage of spent nuclear fuel beyond the licensed life for operation of a reactor.'' The NRC's licensing proceedings for nuclear reactors and ISFSIs have historically relied upon the generic determination in 10 CFR 51.23 to satisfy the agency's obligations under the National Environmental Policy Act (NEPA) with respect to the narrow area of the environmental impacts of continued storage. Environmental impact statements for future reactor and spent-fuel-storage facility licensing actions will not separately analyze the basis for the environmental impacts of continued storage and, as discussed in 10 CFR 51.23, the impact determinations from the generic environmental impact statement are deemed to be incorporated into these environmental impact statements. Environmental assessments for future reactor and spent-fuel-storage facility licensing actions will consider the environmental impacts of continued storage, if the impacts of continued storage of spent fuel are relevant to the proposed action.

B. Major Provisions

The major changes to the rule are summarized as follows:

- The heading of 10 CFR 51.23 is revised to ''Environmental impacts of continued storage of spent nuclear fuel beyond the licensed life for operation of a reactor.''
- Paragraph (a) of 10 CFR 51.23 is revised to provide the Commission's generic determination regarding the continued storage of spent nuclear fuel. The amendments state that the Commission has generically determined that the environmental impacts of continued storage of spent nuclear fuel beyond the licensed life for operation of a reactor are those impacts identified in NUREG–2157, ''Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel'' (GEIS).
- Paragraph (b) of 10 CFR 51.23 is revised to clarify that license renewals for ISFSIs, reactor construction permits, and early site permits are included in the scope of the generic determination. The rule also makes changes to improve readability and to clarify that applicants do not need to address continued storage in their environmental reports. The rule also clarifies that the NRC shall deem the impact determinations in NUREG–2157 regarding continued storage of spent fuel to be incorporated into environmental impact statements (EIS) and that the impact determinations shall be considered in environmental assessments (EA), if the impacts of continued storage are relevant to the proposed action.
- Conforming changes are made to 10 CFR 51.30, 51.50, 51.53, 51.61, 51.75, 51.80, 51.95, and 51.97 to clarify that ISFSI license renewals, construction permits, and early site permits are included in the scope of the generic determination, improve readability, clarify that applicants do not need to address continued storage in their environmental reports, clarify that the NRC shall consider the impact determinations in certain EAs, and clarify that the impact determinations are deemed incorporated into EISs.
- In Table B–1 in appendix B of subpart A of 10 CFR part 51, ''Summary of Findings on NEPA Issues for License Renewal of Nuclear Power Plants,'' the ''Offsite radiological impacts of spent nuclear fuel and high-level waste disposal'' issue is reclassified as a Category 1 issue with no impact level assigned and the finding column entry is revised to address existing radiation standards.
- In Table B–1 in appendix B of subpart A of 10 CFR part 51, the finding column entry for the ''Onsite storage of spent nuclear fuel'' issue is revised to include the impacts during the license renewal term and the impacts from the continued storage period.

Table of Contents

I. Background

In the late 1970s, a number of environmental groups and States challenged the NRC regarding issues related to the storage and disposal of spent fuel. In 1977, the Commission denied a petition for rulemaking (PRM), PRM–50–18, filed by the Natural Resources Defense Council (NRDC) that asked the NRC to determine whether radioactive wastes generated in nuclear power reactors can be disposed of without undue risk to public health and safety and to refrain from granting pending or future requests for reactor operating licenses until the NRC made such a determination. The Commission stated in its denial that, as a matter of policy, it ''. . . would not continue to license reactors if it did not have reasonable confidence that the wastes can and will in due course be disposed of safely'' (42 FR 34391, 34393; July 5, 1977, pet. for rev. dismissed sub nom., *NRDC* v. *NRC,* 582 F.2d 166 (2d Cir. 1978)).

At about the same time, interested parties challenged license amendments that permitted expansion of the capacity of spent fuel pools at two nuclear power plants: Vermont Yankee and Prairie Island. In 1979, the U.S. Court of Appeals for the District of Columbia Circuit, in *Minnesota* v. *NRC,* 602 F.2d 412 (D.C. Cir. 1979), did not stay or vacate the license amendments, but remanded to the Commission the question of whether an offsite storage or disposal solution would be available for the spent fuel at the two facilities at the expiration of their licenses—at that time scheduled for 2007 and 2009–and, if not, whether the spent fuel could be stored safely at those reactor sites until an offsite solution became available.

In 1979, the NRC initiated a generic rulemaking proceeding that stemmed from these challenges and the Court's remand in *Minnesota* v. *NRC.* At that time, the purpose of the Waste Confidence rulemaking was to generically assess whether the Commission could have reasonable assurance that radioactive wastes produced by nuclear power plants ''can be safely disposed of, to determine when such disposal or offsite storage will be available, and to determine whether radioactive wastes can be safely stored onsite past the expiration of existing facility licenses until offsite disposal or storage is available'' (44 FR 61372, 61373; October 25, 1979). On August 31, 1984, the Commission published the Waste Confidence Decision (Decision) (49 FR 34658) and a final rule (49 FR 34688), codified at 10 CFR 51.23. This Decision provided an EA and Finding of No Significant Impact (FONSI) to support the rule. In the 1984 Decision the Commission made five findings (Findings):

1. The Commission finds reasonable assurance that safe disposal of radioactive waste and spent fuel in a mined geologic repository is technically feasible;

2. The Commission finds reasonable assurance that one or more mined geologic repositories for commercial high-level radioactive waste and spent fuel will be available by the years 2007—2009§ [1] and that sufficient repository capacity will be available within 30 years beyond the expiration of any reactor operating license to dispose of existing commercial high-level radioactive waste and spent fuel originating in such reactor and generated up to that time;

3. The Commission finds reasonable assurance that high-level radioactive waste and spent fuel will be managed in a safe manner until sufficient repository capacity is available to assure the safe disposal of all high-level radioactive waste and spent fuel;

4. The Commission finds reasonable assurance that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 30 years beyond the expiration of that reactor's operating license at that reactor's spent fuel storage basin or at either onsite or offsite ISFSIs; and

5. The Commission finds reasonable assurance that safe independent onsite or offsite spent fuel storage will be made available if such storage capacity is needed.

The rule, 10 CFR 51.23, codified the analysis in the Decision and found that for at least 30 years beyond the expiration of a reactor operating license, no significant environmental impacts would result from the storage of spent fuel and expressed the Commission's reasonable assurance that a repository was likely to be available by 2007–2009. The rule also stated that, as a result of this generic determination, the agency did not need to assess the site-specific impacts of continuing to store the spent fuel in either an onsite or offsite storage facility in new reactor licensing EISs or EAs beyond the expiration dates of reactor licenses (10 CFR 51.23(b)). The rulemaking also amended 10 CFR part 50, ''Domestic licensing of production and utilization facilities,'' to require operating nuclear power reactor licensees to submit their plans for managing spent fuel at their site until the fuel is transferred to the U.S. Department of Energy (DOE) for disposal (see 10 CFR 50.54(bb)).

The Commission conducted its first review of the Decision and rule in 1989–1990. This review resulted in the revision of the second and fourth Findings to reflect revised expectations for the date of availability of the first repository, and to clarify that the expiration of a reactor's licensed life for operation referred to the full 40-year initial license for operation and an

[1] The original dates by which the licenses for the facilities at issue in *Minnesota* v. *NRC,* 602 F.2d 412 (D.C. Cir. 1979) would have expired.

additional 30 years (which may include the term of a revised or renewed license). On September 18, 1990, the Commission published the revised Decision (55 FR 38474) and the associated final rule (55 FR 38472). The revised Findings 2 and 4 in the 1990 revised Decision were:

Finding 2: The Commission finds reasonable assurance that at least one mined geologic repository will be available within the first quarter of the twenty-first century, and sufficient repository capacity will be available within 30 years beyond the licensed life for operation (which may include the term of a revised or renewed license) of any reactor to dispose of the commercial high-level radioactive waste and spent fuel originating in such reactor and generated up until that time.

Finding 4: The Commission finds reasonable assurance that, if necessary, spent fuel generated at any reactor can be stored safely and without significant environmental impacts for at least 30 years beyond the licensed life for operation (which may include the term of a revised or renewed license) of that reactor at its spent fuel storage basin or at either onsite or offsite ISFSIs.

The Commission also amended 10 CFR 51.23(a) to reflect the revised timing of the availability of a geologic repository to the first quarter of the twenty-first century. The rule was also revised to reflect that the licensed life for operation may include the term of a revised or renewed license.

The Commission conducted its second review of the Decision and rule in 1999 and concluded that experience and developments after 1990 had confirmed the Findings and made a comprehensive reevaluation of the Decision and rule unnecessary (64 FR 68005; December 6, 1999).

In 2007, the NRC amended 10 CFR 51.23 to indicate that the generic determination provisions applied to combined licenses (72 FR 49352; August 28, 2007).

In 2008, the Commission decided to conduct its third review of the Decision and rule as part of an effort to enhance the efficiency of upcoming combined license application proceedings. The Commission determined that it would be more efficient to resolve certain combined-license-proceeding issues generically, including those related to Waste Confidence. This review resulted in a revision of the second and fourth Findings to reflect revised expectations for the date of availability of the first repository and that spent fuel can be stored safely for at least 60 years beyond the licensed life for operation.

In December 2010, the Commission published its revised Decision (75 FR 81032; December 23, 2010) and associated final rule (75 FR 81037; December 23, 2010). The revised Findings 2 and 4 in the 2010 Decision were:

Finding 2: The Commission finds reasonable assurance that sufficient mined geologic repository capacity will be available to dispose of the commercial high-level radioactive waste and spent fuel generated by any reactor when necessary.

Finding 4: The Commission finds reasonable assurance that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 60 years beyond the licensed life for operation (which may include the term of a revised or renewed license) of that reactor in a combination of storage in its spent fuel storage basin and either onsite or offsite ISFSIs.

Section 51.23(a) of 10 CFR was amended to reflect revised Findings 2 and 4. The changes reflected that spent fuel could be safely stored for at least 60 years beyond the licensed life for operation of a reactor and that sufficient mined geologic repository capacity would be available when necessary.

In response to the 2010 Decision and rule, the States of New York, New Jersey, Connecticut, and Vermont; several public interest groups; and the Prairie Island Indian Community filed a lawsuit in the U.S. Court of Appeals for the District of Columbia Circuit that challenged the Commission's compliance with NEPA. On June 8, 2012, the Court ruled that some aspects of the 2010 proceeding did not satisfy the NRC's NEPA obligations and vacated and remanded the Decision and rule (*New York* v. *NRC,* 681 F.3d 471 (D.C. Cir. 2012) (ADAMS Accession No. ML12191A407). The Court concluded that the Waste Confidence rulemaking is a major federal action necessitating either an EIS or an EA that results in a FONSI. In vacating the 2010 Decision and rule, the Court identified three specific deficiencies in the analysis:

1. Related to the Commission's conclusion that permanent disposal will be available ''when necessary,'' the Court held that the Commission needed to examine the environmental effects of failing to establish a repository;

2. Related to continued storage of spent fuel, the Court concluded that the Commission had not adequately examined the risk of spent fuel pool leaks in a forward-looking fashion; and

3. Also related to the continued storage of spent fuel, the Court concluded that the Commission had not adequately examined the consequences of potential spent fuel pool fires.

In response to the Court's decision, on August 7, 2012, the Commission stated in Commission Order CLI–12–16 (ADAMS Accession No. ML12220A094) that it would not issue reactor or ISFSI licenses dependent upon the Waste Confidence Decision and rule until the Court's remand is appropriately addressed. The Commission stated, however, that this determination extends only to final license issuance and that all licensing reviews and proceedings should continue to move forward.

In the September 6, 2012, Staff Requirements Memorandum (SRM), ''Staff Requirements—COMSECY–12–0016—Approach for Addressing Policy Issues Resulting from Court Decision to Vacate Waste Confidence Decision and Rule'' (ADAMS Accession No. ML12250A032), the Commission directed the staff to develop a generic EIS to support an updated Waste Confidence Decision and rule. In response, the NRC formed the Waste Confidence Directorate in the Office of Nuclear Material Safety and Safeguards (NMSS) to oversee the development of the generic EIS and an update that would replace the previous Waste Confidence Decision and rule.

II. Discussion

This discussion section has been divided into three subsections to better present information on the rule and the proceeding. Section A provides general information related to the proceeding. Section B provides information related to the rule changes. Lastly, Section C provides information on the technical feasibility and availability of safe storage and a repository. Sections A, B, and C present information in a question and answer format.

A. General Information

A1. What action is the NRC taking?

The NRC is issuing a rule to codify its generic determinations regarding the environmental impacts of continued storage of spent fuel at-reactor, or away-from-reactor sites beyond a reactor's licensed life for operation. The analysis in NUREG–2157, ''Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel'' (GEIS) (ADAMS Accession No. ML14196A105) provides a regulatory basis for the rule.

A2. What is the waste confidence proceeding?

Historically, the Commission's Waste Confidence proceeding represented the

Commission's generic determination and generic environmental analysis that spent fuel could be stored safely and without significant environmental impacts for a period of time past the licensed life for operation of a reactor. This generic environmental determination was reflected in 10 CFR 51.23, which addressed the NRC's NEPA obligations with respect to the continued storage of spent fuel.

This rule and GEIS represent a change in the format of the Commission's Waste Confidence proceeding. Because the Commission has prepared a generic EIS, which provides a detailed analysis of the environmental impacts associated with continued storage, it is no longer necessary to make a ''finding of no significant impact,'' or ''FONSI,'' as that term is used in NEPA. This final rule codifies the environmental impact determinations reflected in the GEIS. This is discussed in more detail in Question A.11.

A3. Why is the NRC doing this now?

On June 8, 2012, the U.S. Court of Appeals for the District of Columbia Circuit vacated the Commission's 2010 Waste Confidence rulemaking, and remanded the rulemaking to the NRC to address deficiencies related to the NRC's NEPA analysis. On September 6, 2012, the Commission instructed NRC staff to proceed with a generic EIS to analyze the environmental impacts of continued storage, address the issues raised in the Court's decision, and update the rule in accordance with the analysis in the EIS. The GEIS and this final rule implement the Commission's direction.

A4. Whom will this action affect?

This rule will affect any nuclear power reactor applicant and licensee seeking issuance or renewal of an operating license or construction permit for a nuclear power reactor under 10 CFR parts 50 or 54, ''Requirements for renewal of operating licenses for nuclear power plants;'' issuance of a combined license or early site permit for a nuclear power reactor under 10 CFR part 52, ''Licenses, certifications, and approvals for nuclear power plants;'' or some amendments of a license under 10 CFR parts 50 or 52. This rule will also affect the issuance of an initial, amended, or renewed license for storage of spent fuel at an ISFSI under 10 CFR part 72, ''Licensing requirements for the independent storage of spent nuclear fuel, high-level radioactive waste, and reactor-related greater than Class C waste.'' The rule could also affect participants in any proceeding addressing these licensing actions.

A5. How can the NRC conduct a generic review when spent fuel is stored at specific sites?

Since 1984, the NRC has generically addressed the environmental impacts of continued storage though a generic NEPA analysis and rule. Without a generic environmental impact analysis, site-specific consideration of the environmental impacts of continued storage would be necessary. In remanding the 2010 Waste Confidence rule to the NRC for additional analysis, the Court of Appeals for the District of Columbia Circuit continued the long history of federal courts approving a generic approach to the analysis of the environmental impacts of nuclear power reactor operation. In *New York* v. *NRC,* the Court of Appeals endorsed the NRC's generic approach, stating that there is ''no reason that a comprehensive general analysis would be insufficient to examine on-site risks that are essentially common to all plants.'' (New York, 681 F.3d at 480). After conducting the analysis in the GEIS, the NRC concludes that the impacts of continued storage will not vary significantly across sites, despite variations in site-specific characteristics. Accordingly, the NRC believes that a generic approach is appropriate for this proceeding.

The NRC has determined in the GEIS that the direct and indirect environmental impacts of continued storage at reactors can be analyzed generically. This means that, for each of the resource areas analyzed in the GEIS, the NRC has reached a generic determination (SMALL, MODERATE, LARGE, or a range) that is appropriate for all sites. As discussed in the GEIS, these impact determinations are not expected to differ from those that would result from individual site-specific reviews for the continued storage period.

The NRC's evaluation of the environmental impacts of continued storage builds upon substantial operating experience over the licensed life of the reactor. The environmental impacts associated with spent fuel storage during the licensed life for operation are addressed during the NRC's review of license applications and license renewal applications. The environmental impacts associated with spent fuel storage in an at-reactor ISFSI during the licensed life for operation of a reactor are addressed through the 1989 environmental assessment supporting the final rule for 10 CFR part 72 general licenses, in the environmental assessments prepared to support rules approving Certificates of Compliance for dry cask systems, in a site-specific environmental assessment for specifically licensed ISFSIs, or during the NRC's review of license renewal applications. Site-specific analyses capture the characteristics that most obviously vary from site to site, such as seismic activity, land use, ecosystem, and local population variations. During operation, facility operators and the NRC gain significant additional experience with site-specific issues, including those related to issues of site configuration and maintenance history. During the licensed life of a facility, many factors ensure that operational impacts, including those from accidents or off-normal releases, are within regulatory limits at any given site. These factors include the plant's operating experience, licensee compliance with NRC regulations, site-specific mitigation and controls informed by the licensing reviews, and ongoing regulatory oversight and enforcement actions. In the continued storage period, many of the environmental impacts related to storage of spent fuel are not expected to vary beyond the range experienced during operations. Changes in the environment during the continued storage periods examined in the GEIS are expected to be gradual and predictable. There are inherent uncertainties in determining impacts for the long-term and indefinite timeframes, and, with respect to some resource areas, those uncertainties could result in impacts that, although unlikely, could be larger than those that are to be expected at most sites and have therefore been presented as ranges rather than as a single impact level. Those uncertainties exist, however, regardless of whether the impacts are analyzed generically or site-specifically. Despite variations in site-specific characteristics, a generic analysis is capable of determining and expressing the environmental impacts that may result from continued storage.

The reasonableness of NRC's determinations about continued storage is supported by numerous environmental reviews of spent fuel storage. Spent fuel storage during the period of operations has been considered in site-specific licensing of new reactors (for spent fuel pools only), ISFSIs, and license renewals. Finally, concerned parties who meet the waiver criteria in 10 CFR 2.335 will be able to raise site-specific issues related to continued storage at the time of a specific license application.

A6. What types of wastes are addressed by the GEIS and rule?

The environmental analysis in the GEIS and the rule covers low and high burn-up spent fuel generated in light-water nuclear power reactors. It also covers mixed oxide (MOX) fuel,[2] since MOX fuel is substantially similar to existing light-water reactor fuel and is, in fact, being considered for use in existing light-water reactors in the United States. It also covers spent fuel from small modular light-water reactors. Small modular light-water reactors being developed will use fuel very similar in form and materials to the existing operating reactors and will not, therefore, introduce new technical challenges to the storage of spent fuel. The environmental analysis in the GEIS also covers the spent fuel from one high-temperature gas-cooled reactor (HTGR) built and commercially operated: Fort Saint Vrain.

A7. What activities are not covered by the GEIS and rule?

The GEIS and rule do not consider disposal of spent fuel or storage of spent fuel during the licensed life for operation of the power reactor. Additionally, the GEIS and rule do not address foreign spent fuel, non-power reactor spent fuel (e.g., fuel from research and test reactors), defense waste, Greater-than-Class C low-level waste, reprocessing of commercial spent fuel, or the need for nuclear power (see also question A9).

A8. How does this rulemaking relate to the licensing of future away-from-reactor ISFSIs?

The GEIS and rule do not satisfy the NRC's obligations under NEPA to analyze the environmental impacts of spent fuel storage during the term of a facility's license. The NRC must conduct a site-specific environmental analysis to support the licensing of any future away-from-reactor ISFSI. The NRC cannot use the rule and GEIS as a substitute for the environmental analysis associated with constructing and operating an away-from-reactor ISFSI. The site-specific NEPA analysis for an away-from-reactor ISFSI can only rely on the analysis in the GEIS and the requirements in the rule to satisfy the NRC's NEPA obligations with respect to the storage of spent fuel during the applicable continued storage period.

[2] Mixed oxide fuel (often called MOX fuel) is a type of nuclear power reactor fuel that contains plutonium oxide mixed with either natural or depleted uranium oxide in ceramic pellet form.

A9. Will the rulemaking authorize the storage of spent fuel at the operating reactor site near me?

No, the rule does not authorize the storage of spent fuel at any site. The rule reflects only the generic environmental analysis for the period of spent fuel storage beyond a reactor's licensed life for operation and before disposal in a repository. This proceeding is not a substitute for licensing actions that typically include site-specific NEPA analysis and site-specific safety analyses (see also question A10).

In addition, the NRC's GEIS and final rule do not pre-approve any particular waste storage or disposal site technology, nor do they require that a specific cask design be used for storage. Individual licensees and applicants, including any applicant for a high-level radioactive waste repository, are required to have a license from the NRC before storing or disposing of any spent fuel. Separately, every 10 CFR part 50 or part 52 nuclear power reactor licensee, by virtue of 10 CFR part 72, subpart K, has a general license authorizing storage of spent fuel in cask designs that are approved by the NRC.

A10. How will the rule and GEIS be used in site-specific licensing actions?

The rule, which adopts the generic impact determinations regarding continued storage from the GEIS, satisfies the NRC's NEPA obligations with respect to continued storage for initial, renewed, and amended licenses for reactors and ISFSIs, as well as for construction permits and early site permits. The rule does not satisfy the NRC's obligation to assess the environmental impacts of spent fuel storage during a facility's licensed life for operation. The impacts of storage during a proposed license term at a specific site, as distinct from the timeframes of continued storage covered by the rule, would be subject to the safety and environmental review as part of other licensing reviews.

The GEIS (NUREG–2157) only satisfies a portion of the NRC's NEPA obligations related to the issuance of a reactor or spent fuel storage facility license by generically evaluating the environmental impacts of continued storage. These generic determinations will not be revisited and may not be challenged in individual licensing proceedings without the grant of a waiver under 10 CFR 2.335. Taken together, the GEIS, the site-specific environmental review, and other applicable environmental reviews will provide the decision-maker in a licensing proceeding with a complete environmental analysis of the impacts associated with spent fuel storage prior to disposal in a geologic repository.

Under final 10 CFR 51.23, the impact determinations in NUREG–2157 are deemed incorporated into an EIS that is prepared to support a licensing action for a power reactor or ISFSI. For a licensing action supported by an EA, the NRC will consider the impact determinations in NUREG–2157 in the EA, if the impacts of continued storage of spent fuel are relevant to the proposed action. This means that NUREG–2157 provides the determinations of the environmental impacts of continued storage to be used in site-specific environmental reviews. No additional analysis of the impacts of continued storage is required.

The findings of the site-specific environmental review may be challenged during the initial licensing of a facility and at license renewal. As a result of this rulemaking, what may not be considered in those proceedings—due to the generic determination in 10 CFR 51.23(a)—are the environmental impacts of continued storage of spent fuel beyond the licensed life for operation of the reactor contained in NUREG–2157. The NRC's regulations at 10 CFR 2.335, however, allow participants in NRC's licensing proceedings to request that a rule, including 10 CFR 51.23, not be applied, or be waived, in a particular proceeding because special circumstances are present that would prevent the application of the rule from satisfying the purpose of the rule.

The GEIS and rule are applicable only to future NRC licensing actions and do not apply to completed licensing actions.

A11. Why is there not a separate waste confidence decision document?

Historically, the Waste Confidence Decision contained five ''Findings'' that addressed the technical feasibility of a mined geologic repository, the degree of assurance that disposal would be available by a certain time, and the degree of assurance that spent fuel and high-level waste could be managed safely without significant environmental impacts for a certain period beyond the expiration of plants' operating licenses. Preparation of and reliance upon a GEIS is a fundamental departure from the approach used in past proceedings. The GEIS acknowledges the uncertainties inherent in a prediction of repository availability and provides an environmental analysis of three timeframes, including one where a repository does not become available. The relationship between the prior

''Findings'' and the technical feasibility analyses in the current GEIS is discussed in greater detail in Section D.2.4.1. As noted in the GEIS, the former ''Findings'' were outputs of previous Waste Confidence proceedings, which included an environmental assessment and finding of no significant impact. In contrast, the current GEIS provides a detailed analysis under NEPA and provides an analysis of specific impacts.

To support the analysis in the GEIS and the rule, the underlying assumptions in the GEIS address the issues assessed in the previous five ''Findings'' as conclusions regarding the technical feasibility and availability of a repository and conclusions regarding the technical feasibility of safely storing spent fuel in an at-reactor or away-from-reactor storage facility. The issue of the technical feasibility of a geologic repository was historically addressed in Finding 1 and is now discussed in Section B.2.1 of the GEIS and the availability of a repository was addressed in Finding 2 and is now discussed in Section B.2.2. The regulatory framework for spent fuel storage was previously addressed in Findings 3 and 5 and is now addressed in Section B.3.3. The safe storage of spent fuel pending ultimate disposal at a repository was previously addressed in Finding 4 and is now addressed in Sections B.3.1 and B.3.2. Thus, the GEIS fulfills the NRC's NEPA obligations for analyzing the environmental impacts of continued storage in a more traditional NEPA format.

A12. What is the status of the extended storage effort?

The extended storage effort is an activity that is separate from this proceeding and that focuses on technical and regulatory considerations for the continued effective regulation of spent fuel storage and subsequent transportation over extended periods (up to 300 years). Presently, the NRC believes that the existing regulatory framework used to renew current licenses can be extended to regulate the management of spent fuel for multiple renewal periods. The staff is examining technical areas associated with multiple renewals of fixed-term, dry storage licenses and certificates to address age-related degradation of dry cask storage systems, structures, and components. The NRC acknowledges that current licensing practices may evolve over time in response to improved understanding, operational experience, and Commission policy direction. As technical, regulatory, and policy issues are resolved, the NRC will revise guidance and staff qualification and training accordingly. Completion of the Extended Storage effort is planned for the end of the decade. The NRC will evaluate any new information that is developed during the Extended Storage effort to determine whether it is necessary to update the GEIS or 10 CFR 51.23.

A13. How can the NRC proceed with this rulemaking while research on the extended storage of spent fuel is ongoing?

Development of the GEIS and the NRC's ongoing research are two separate efforts that are not dependent on each other. This rulemaking updates the NRC's environmental rules in 10 CFR part 51. The GEIS, NUREG–2157, which was prepared to satisfy the NRC's NEPA obligations, provides a regulatory basis for the rule. Under NEPA, an EIS, such as the one prepared to support this rulemaking, need only consider currently available information. As the Commission recently stated, ''NEPA requires that we conduct our environmental review with the best information available today. It does not require that we wait until inchoate information matures into something that later might affect our review.'' (*Luminant Generation Co. LLC* (Comanche Peak Nuclear Power Plant, Units 3 and 4), et al., CLI–12–7, 75 NRC 379, 391–92 (2012)). Further, the United States Court of Appeals for the District of Columbia Circuit explained that ''creating [the agency's] models with the best information available when it began its analysis and then checking the assumptions of those models as new information became available, was a reasonable means of balancing competing considerations, particularly given the many months required to conduct full modeling with new data.'' (*Village of Bensenville* v. *Federal Aviation Administration,* 457 F.3d 52, 71–72 (D.C. Cir. 2006)). The United States Supreme Court held that ''an agency need not supplement an EIS every time new information comes to light after the EIS is finalized. To require otherwise would render agency decision making intractable, always awaiting updated information only to find the new information outdated by the time a decision is made.'' (*Marsh* v. *Oregon Natural Resources Council,* 490 U.S. 360, 374 (1989)).

In the GEIS, the NRC has concluded that sufficient information exists to perform an analysis of continued storage impacts for the three timeframes analyzed. Nonetheless, the NRC continues to identify and resolve potential issues associated with the storage and transportation of spent fuel for periods beyond an ISFSI's initial licensing and first renewal. The ongoing research into the extended storage of spent fuel is part of the NRC's effort to continuously evaluate and update its safety regulations. The NRC is not aware of any deficiencies in its current regulations that would challenge the continued safe storage of spent fuel in spent fuel pools or dry cask systems.

If, at some time in the future, the NRC were to identify a concern with the safe storage of spent fuel, the NRC would evaluate the issue and take whatever action or make whatever change in its regulatory program necessary to protect public health and safety. The NRC will continue to monitor the ongoing research into spent fuel storage. When warranted by significant events that may call into question the appropriateness of the rule, the NRC will review the GEIS and rule to determine if revisions are necessary.

A14. How frequently does the NRC plan to revisit the GEIS and rule?

The Commission has reviewed the rule and supporting analysis four times since 1984; in 1990, 1999, 2010, and now in 2014. The NRC does not have a schedule for revisiting the GEIS and rule after this current update. The NRC will review the GEIS and rule for possible revision when warranted by significant events that may call into question the appropriateness of the rule.

B. Rulemaking

B1. What is the purpose of this rulemaking?

Historically, the NRC and license applicants have relied on 10 CFR 51.23 to conclusively address the environmental impacts of continued storage in environmental reports, EISs, and EAs. The NRC's use of 10 CFR 51.23 to satisfy its NEPA obligations with respect to continued storage will enhance efficiency in individual licensing reviews by incorporating the determinations from the generic analysis of the environmental impacts of continued storage into environmental impact statements that need to address continued storage. For EAs that need to address continued storage, the NRC will consider the environmental impacts of continued storage, as provided in 10 CFR 51.23. Having confirmed that the environmental impacts of continued storage can be analyzed generically, the Commission has decided to codify the GEIS impact determinations in a revised rule, 10 CFR 51.23. Because the impacts of continued storage have been generically assessed in the GEIS, NEPA

analyses for relevant future reactor and spent fuel storage facility licensing actions will not need to separately determine the environmental impacts of continued storage. The analysis in the GEIS constitutes a regulatory basis for the rule at 10 CFR 51.23.

Part of the environmental analysis for a nuclear power reactor or storage facility license includes a review of the impacts caused by the spent fuel generated in the reactor. That analysis must assess the impacts of the spent fuel from generation through disposal. As codified, the impact determinations in the GEIS will inform the decision-makers in licensing proceedings of the reasonably foreseeable environmental impacts of continued storage. These determinations will be weighed along with other impacts determined by the NRC on a site-specific basis for the facility or an activity. Thus, in the course of an individual licensing proceeding, the decision-maker will be able to compare all the environmental impacts of a proposed licensing action (e.g., licensing a nuclear power reactor), including continued storage impacts, to the environmental impacts of reasonable alternatives, including the no-action alternative.

B2. What is meant by the phrase ''licensed life for operation of a reactor''?

The phrase ''licensed life for operation of a reactor'' refers to the term of the license to operate a reactor. The GEIS assumes an original licensed life of 40 years and up to two 20-year license extensions [3] for each reactor, for a total of up to 80 years of operation. The phrase, ''beyond licensed life for operation of a reactor,'' refers to the period beyond the initial license term to operate a reactor and, if the license is extended, beyond the renewed license term. The date of permanent cessation of operations (shut down) does not necessarily mark the transition to ''beyond licensed life for operation.'' Because the continued storage analysis informs the larger NEPA analysis that occurs before a license is issued, even if a reactor is shut down years before the end of its initial or extended license term, ''licensed life for operation'' continues to refer to the initial or renewed license term, and not the actual operational period of a reactor. The environmental analysis supporting spent fuel storage during the licensed life for operation of each reactor covers the full period for which the license or license renewal was issued, even if operation of the reactor ended before the license expired. Thus, continued storage begins at the end of the licensed life for operation of a reactor. The starting point for continued storage does not depend on whether the spent fuel is stored in a spent fuel pool, dry casks under a general license, or dry casks under a specific license.

B3. What timeframes are considered in the GEIS?

The NRC has analyzed three timeframes in the GEIS that represent various scenarios for the length of continued storage that may be needed before spent fuel is sent to a repository. The first timeframe is the short-term timeframe, which analyzes 60 years of continued storage after the end of a reactor's licensed life for operation. The NRC considers the short-term timeframe to be the most likely scenario for continued storage; and the GEIS assumes that a repository would become available by the end of the short-term timeframe. The GEIS also analyzed two additional timeframes: Long-term and indefinite. The long-term timeframe considers the environmental impacts of continued storage for 160 years after the end of a reactor's licensed life for operation. Finally, the GEIS includes an analysis of an indefinite timeframe, which assumes that a repository never becomes available.

By the end of the short-term timeframe, some spent fuel could be between 100 and 140 years old. Short-term storage of spent fuel includes the following:

- Continued storage of spent fuel in spent fuel pools (at-reactor only) and ISFSIs;
- Routine maintenance of spent fuel pools and ISFSIs (e.g., maintenance of concrete pads); and
- Handling and transfer of spent fuel from spent fuel pools to ISFSIs (all spent fuel is assumed to be removed from the spent fuel pool by the end of the short-term timeframe).

Long-term storage is continued storage of spent fuel for an additional 100 years after the short-term timeframe for a total of 160 years beyond the licensed life for operation of a reactor. The GEIS assumes that all spent fuel has been transferred from the spent fuel pool to an ISFSI by the end of the short-term period. The GEIS also assumes that a repository would become available by the end of the long-term timeframe. By the end of the long-term timeframe, some spent fuel could be between 200 and 240 years old. Long-term storage activities include the following:

- Continued storage of spent fuel in ISFSIs, including routine maintenance;
- One time replacement of ISFSIs and spent fuel canisters and casks; and
- Construction, operation, and one replacement of a dry transfer system (DTS).

The third timeframe analyzed by the GEIS is the indefinite timeframe, which assumes that a repository does not become available. The Commission does not believe that this scenario is likely to occur, but its inclusion in the analysis allows the NRC to fully analyze the environmental impacts associated with continued storage. The activities during the indefinite timeframe are the same as those that would occur for the long-term timeframe; however, without a repository the replacement activities would occur every 100 years.

B4. What are the key assumptions used in the GEIS?

To guide its analysis, the NRC relied upon certain assumptions regarding storage of spent fuel. A detailed discussion of these assumptions is contained in Section 1.8.3 of the GEIS. Key assumptions used in the GEIS include, but are not limited to the following:

- Institutional controls, including the continued regulation of spent fuel, will continue.
- Spent fuel canisters and casks would be replaced approximately once every 100 years.
- A DTS would be built at each ISFSI location for fuel repackaging and the ISFSIs and DTS facilities would be replaced approximately once every 100 years.
- All spent fuel would be removed from spent fuel pools to dry storage by the end of the short-term timeframe (60 years after licensed life).
- An ISFSI of sufficient size to hold all spent fuel generated during licensed life for operation will be constructed before the end of the reactor's licensed life for operation.
- In accordance with NEPA, the NRC's analysis in the GEIS is based on current technology and regulations.

B5. How will significant changes in these assumptions be addressed under the NRC's regulatory framework?

The NRC has historically reviewed the rule as the policy and technological foundations for spent fuel storage and disposal have evolved. Technological changes that might require revisiting the assumptions, such as revisions to the NRC's safety regulations that allow or require a shorter or longer period of

[3] The Commission's regulations provide that renewed operating licenses may be subsequently renewed, although no licensee has yet submitted an application for such a subsequent renewal. The GEIS assumes two renewals in evaluating potential environmental impacts.

time before repackaging, are not likely to affect the overall conclusions in the GEIS that provide a regulatory basis for the rule and, accordingly, every future change in the assumptions underlying the GEIS would not necessarily justify an update to the rule. These technological changes could require licensees to amend their licenses, which would be accompanied by site-specific safety and environmental reviews related to the specific amendments. The NRC will continue to monitor changes in national policy and developments in spent fuel storage and disposal technology. When warranted by significant events that may call into question the appropriateness of the rule, the NRC will review the GEIS and rule to determine if revisions are necessary.

B6. What is the significance of the levels of impact in the GEIS (SMALL, MODERATE, LARGE)?

The NRC describes the affected environment in terms of resource areas: land use, socioeconomics, environmental justice, air quality, climate change, geology and soils, surface water, groundwater, terrestrial resources, aquatic ecology, special status species and habitats, historic and cultural resources, noise, aesthetics, waste management, transportation, and public and occupational health. The GEIS contains analyses of the environmental impacts associated with each resource area. Additionally, the GEIS considers the impacts on resource areas caused by postulated acts of terrorism and accidents. The significance of the magnitude of the impact for most of the resource areas evaluated is expressed as SMALL, MODERATE, or LARGE. The general definitions of significance levels are:

SMALL: The environmental effects are not detectable or are so minor that they will neither destabilize nor noticeably alter any important attribute of the resource. For the purposes of assessing radiological impacts, the Commission has concluded that radiological impacts that do not exceed permissible levels in the Commission's regulations are considered small.

MODERATE: The environmental effects are sufficient to alter noticeably, but not to destabilize, important attributes of the resource.

LARGE: The environmental effects are clearly noticeable and are sufficient to destabilize important attributes of the resource.

The GEIS discussion of each resource area includes an explanation of how the significance category was determined. For issues in which the significance determination is based on risk (i.e., the probability of occurrence as well as the potential consequences), the probability of occurrence as well as the potential consequences have been factored into the determination of significance. For some resource areas, the impact determination language is specific to the authorizing regulation, executive order, or guidance.

B7. What are the environmental impacts of at-reactor continued storage?

The environmental impacts of continued storage are analyzed in the GEIS. The GEIS contains a detailed analysis of the impacts for short-term storage, long-term storage, and indefinite storage. The analysis considers both at-reactor storage and away-from-reactor storage.[4] Impacts attributable to at-reactor storage are addressed here and the impacts from away-from-reactor storage are addressed in question B8.

For at-reactor storage, the unavoidable adverse environmental impacts for each resource area are SMALL for all timeframes with the exception of waste management impacts, which are SMALL to MODERATE for the indefinite storage timeframe, and historic and cultural resource impacts, which are SMALL to LARGE for the long-term and indefinite storage timeframes. These elevated impact conclusions are influenced, in part, by the uncertainties regarding the specific circumstances of continued storage over long timeframes, including site-specific characteristics that could affect the intensity of potential environmental impacts, and the resulting analysis assumptions that have been made by the NRC as documented in detail in Chapter 4 of the GEIS. The MODERATE waste-management impacts are associated with the volume of nonhazardous solid waste generated by assumed facility replacement activities for the indefinite timeframe. The historic and cultural resource impacts would range from SMALL to LARGE for the long-term and indefinite timeframes. This range takes into consideration routine maintenance and monitoring (i.e., no ground-disturbing activities), the absence or avoidance of historic and cultural resources, and potential ground-disturbing activities that could impact historic and cultural resources. In addition, the analysis considers uncertainties inherent in analyzing this resource area over long timeframes. These uncertainties include any future discovery of previously unknown historic and cultural resources; resources that gain significance within the vicinity and the viewshed (e.g., nomination of a historic district) due to improvements in knowledge, technology, and excavation techniques; and changes associated with predicting resources that future generations will consider significant. A SMALL impact would occur if replacement activities occur in previously disturbed areas, there are no historic or cultural resources present, or if historical and cultural resources can be avoided. A potential MODERATE or LARGE impact would result if historic and cultural resources are present at a site and, because they cannot be avoided, are impacted by ground-disturbing activities during the long-term or indefinite timeframe.

For some resource areas, the impact determination language is specific to the authorizing regulation, executive order, or guidance. For special status species, continued storage impacts would be determined as part of an Endangered Species Act consultation and the Magnuson-Stevens Fishery Conservation and Management Act. Continued at-reactor storage is not expected to cause disproportionately high and adverse human health and environmental effects on minority and low-income populations. In addition, as indicated in the Commission's policy statement, environmental justice impacts would be considered during site-specific environmental reviews for specific licensing actions.

Table 1 provides a summary of the environmental impacts of continued at-reactor storage. Detailed discussion for each resource area can be found in Chapter 4 of the GEIS. Cumulative impacts are addressed in Chapter 6 of the GEIS. Chapter 8 of the GEIS provides a summary of the impacts.

[4] For the purposes of the GEIS impact analysis, the GEH-Morris facility and the DOE TMI–2 ISFSI at Idaho Falls, Idaho were considered under the at-reactor storage evaluation.

TABLE 1—ENVIRONMENTAL IMPACTS OF AT-REACTOR CONTINUED STORAGE OF SPENT FUEL

Resource area	Short-term storage	Long-term storage	Indefinite storage
Land Use	SMALL	SMALL	SMALL.
Socioeconomics	SMALL	SMALL	SMALL.
Environmental Justice	Disproportionately high and adverse impacts are not expected.		
Air Quality:			
Air Emissions	SMALL	SMALL	SMALL.
Thermal Release	SMALL	SMALL	SMALL.
Climate Change	SMALL	SMALL	SMALL.
Geology and Soils	SMALL	SMALL	SMALL.
Surface Water:			
Quality	SMALL	SMALL	SMALL.
Consumptive Use	SMALL	SMALL	SMALL.
Groundwater:			
Quality	SMALL	SMALL	SMALL.
Consumptive Use	SMALL	SMALL	SMALL.
Terrestrial Resources	SMALL	SMALL	SMALL.
Aquatic Ecology	SMALL	SMALL	SMALL.
Special Status Species and Habitats.	Impacts for Federally threatened and endangered species and Essential Fish Habitat would be determined as part of consultations for the Endangered Species Act and Magnuson-Stevens Fishery Conservation and Management Act.		
Historic and Cultural Resources	SMALL	SMALL to LARGE	SMALL to LARGE.
Noise	SMALL	SMALL	SMALL.
Aesthetics	SMALL	SMALL	SMALL.
Waste Management:			
LLW	SMALL	SMALL	SMALL.
Mixed Waste	SMALL	SMALL	SMALL.
Nonradioactive Waste	SMALL	SMALL	SMALL to MODERATE.
Transportation:			
Traffic	SMALL	SMALL	SMALL.
Health impacts	SMALL	SMALL	SMALL.
Public and Occupational Health	SMALL	SMALL	SMALL.
Accidents	SMALL	SMALL	SMALL.
Sabotage or Terrorism	SMALL	SMALL	SMALL.

B8. What are the environmental impacts of away-from-reactor continued storage?

The away-from-reactor environmental impacts analyzed in the GEIS include the impacts from constructing the ISFSI. Although an away-from-reactor ISFSI would be subject to a site-specific licensing review that includes an EIS that would assess the environmental impacts due to construction, the impacts due to construction are included in the GEIS due to the potential for that construction to occur during the timeframes analyzed in the GEIS. Inclusion of the away-from-reactor ISFSI in the GEIS does not mean that the NRC is proposing an interim or consolidated storage facility.

For away-from-reactor storage, the unavoidable adverse environmental impacts for each resource area is SMALL except for air quality, terrestrial ecology, aesthetics, waste management, and transportation where the impacts are SMALL to MODERATE. Socioeconomic impacts range from SMALL (adverse) to LARGE (beneficial) and historic and cultural resource impacts could be SMALL to LARGE. The potential MODERATE impacts on air quality, terrestrial wildlife, and transportation are based on potential construction-related fugitive dust emissions, terrestrial wildlife direct and indirect mortalities, terrestrial habitat loss, and temporary construction traffic impacts. The potential MODERATE impacts on aesthetics and waste management are based on noticeable changes to the viewshed from constructing a new away-from-reactor ISFSI, and the volume of nonhazardous solid waste generated by assumed ISFSI and DTS replacement activities for the indefinite timeframe. The potential LARGE (beneficial) impacts on socioeconomics are due to local economic tax revenue increases from an away-from-reactor ISFSI. The potential impacts to historic and cultural resources during the short-term storage timeframes would range from SMALL to LARGE. The magnitude of adverse effects on historic properties and impacts on historic and cultural resources largely depends on where facilities are sited, what resources are present, the extent of proposed land disturbance, whether the area has been previously surveyed to identify historic and cultural resources, and if the licensee has management plans and procedures that are protective of historic and cultural resources. Even a small amount of ground disturbance (e.g., clearing and grading) could affect a small but significant resource. In most instances, placement of storage facilities on the site can be adjusted to minimize or avoid impacts on any historic and cultural resources in the area. However, the NRC recognizes that this is not always possible. The NRC's site-specific environmental review and compliance with the National Historic Preservation Act (NHPA) process could identify historic properties, identify adverse effects, and potentially resolve adverse effects on historic properties and impacts on other historic and cultural resources. Under the NHPA, mitigation does not eliminate a finding of adverse effect on historic properties. The potential impacts to historic and cultural resources during the long-term and indefinite storage timeframes would range from SMALL to LARGE. This range takes into consideration routine maintenance and monitoring (i.e., no

ground-disturbing activities), the absence or avoidance of historic and cultural resources, and potential ground-disturbing activities that could affect historic and cultural resources. The analysis also considers uncertainties inherent in analyzing this resource area over long timeframes. These uncertainties include any future discovery of previously unknown historic and cultural resources; resources that gain significance within the vicinity and the viewshed (e.g., nomination of a historic district) due to improvements in knowledge, technology, and excavation techniques and changes associated with predicting resources that future generations will consider significant. If construction of a DTS and replacement of the ISFSI and DTS occurs in an area with no historic or cultural resource present or construction occurs in a previously disturbed area that allows avoidance of historic and cultural resources then impacts would be SMALL. By contrast, a MODERATE or LARGE impact could result if historic and cultural resources are present at a site and, because they cannot be avoided, are impacted by ground-disturbing activities during the long-term and indefinite timeframes.

Impacts on Federally listed species, designated critical habitat, and essential fish habitat would be based on site-specific conditions and determined as part of consultations required by the Endangered Species Act and the Magnuson-Stevens Fishery Conservation and Management Act. Continued storage at an away-from-reactor ISFSI is not expected to cause disproportionately high and adverse human health and environmental effects on minority and low-income populations. In addition, as indicated in the Commission's policy statement, should the NRC receive an application for a proposed away-from-reactor ISFSI, a site-specific NEPA analysis would be conducted, and this analysis would include consideration of environmental justice impacts.

Table 2 provides a summary of the environmental impacts of away-from-reactor continued storage. Detailed discussion for each resource area can be found in Chapter 5 of the GEIS. Cumulative impacts are addressed in Chapter 6 of the GEIS. Chapter 8 of the GEIS provides a summary of the impacts.

TABLE 2—ENVIRONMENTAL IMPACTS OF AWAY-FROM REACTOR CONTINUED STORAGE OF SPENT FUEL

Resource area	Short-term storage	Long-term storage	Indefinite storage
Land Use	SMALL	SMALL	SMALL
Socioeconomics	SMALL (adverse) to LARGE (beneficial).	SMALL (adverse) to LARGE (beneficial).	SMALL (adverse) to LARGE (beneficial).
Environmental Justice	Disproportionately high and adverse impacts are not expected.		
Air Quality	SMALL to MODERATE	SMALL	SMALL.
Climate Change	SMALL	SMALL	SMALL.
Geology and Soils	SMALL	SMALL	SMALL.
Surface Water:			
Quality	SMALL	SMALL	SMALL.
Consumptive Use	SMALL	SMALL	SMALL.
Groundwater:			
Quality	SMALL	SMALL	SMALL.
Consumptive Use	SMALL	SMALL	SMALL.
Terrestrial Resources	SMALL to MODERATE	SMALL	SMALL.
Aquatic Ecology	SMALL	SMALL	SMALL.
Special Status Species and Habitats.	Impacts for Federally threatened and endangered species and Essential Fish Habitat would be determined as part of consultations for the Endangered Species Act and Magnuson-Stevens Fishery Conservation and Management Act.		
Historic and Cultural Resources	SMALL to LARGE	SMALL to LARGE	SMALL to LARGE.
Noise	SMALL	SMALL	SMALL.
Aesthetics	SMALL to MODERATE	SMALL to MODERATE	SMALL to MODERATE.
Waste Management:			
LLW	SMALL	SMALL	SMALL.
Mixed Waste	SMALL	SMALL	SMALL.
Nonradioactive Waste	SMALL	SMALL	SMALL to MODERATE.
Transportation:			
Traffic	SMALL to MODERATE	SMALL to MODERATE	SMALL to MODERATE.
Health	SMALL	SMALL	SMALL.
Public and Occupational Health	SMALL	SMALL	SMALL.
Accidents	SMALL	SMALL	SMALL.
Sabotage or Terrorism	SMALL	SMALL	SMALL.

B9. Does a potentially LARGE impact or a range of impacts affect the generic determination in the GEIS?

No, the generic determinations found in the GEIS are not affected by a potentially LARGE impact or a range of impacts. The NRC has determined in the GEIS that the direct and indirect environmental impacts of continued storage can be analyzed generically. This means that, for each of the resource areas analyzed in the GEIS, the NRC has reached a generic determination (SMALL, MODERATE, LARGE, or a range) that is appropriate for all sites. These impact determinations are not expected to differ from those that would result from individual site-specific reviews for the continued storage period. There are inherent uncertainties in determining impacts for the long-term and indefinite timeframes, regardless of whether the impacts are analyzed generically or site-specifically. Because the impacts of continued storage are not expected to vary significantly across sites, despite

variations in site-specific characteristics, a generic analysis is appropriate to determine the reasonably foreseeable environmental impacts that may result from continued storage.

B10. How does the rule address the impacts from continued storage of spent fuel?

The NRC is revising 10 CFR 51.23(a) to reflect the environmental impact determinations of the GEIS (NUREG–2157). Final 10 CFR 51.23(a) provides that the Commission has generically determined that the environmental impacts of continued storage of spent nuclear fuel beyond the licensed life for operation of a reactor are those impacts identified in NUREG–2157. The NRC will use the impact determinations in NUREG–2157 to inform the decision-makers in licensing proceedings of the impacts of continued storage.

B11. What clarifying changes are addressed in the rule?

Paragraph (b) of 10 CFR 51.23 is revised to clarify that ISFSI license renewals, reactor construction permits, and early site permits are included in the scope of the generic determination in 51.23(a). Additionally, paragraph (b) is revised for readability by restructuring the paragraph and separating the requirements that apply to an applicant from those that apply to the NRC. This paragraph is also revised to provide additional clarity regarding how the generic determination in 10 CFR 51.23(a) will be implemented in future NRC NEPA reviews. These amendments to 10 CFR 51.23(b) are intended to clarify how the NRC has interpreted and implemented 10 CFR 51.23 and how it will do so in future licensing activities. The approach taken for an EA differs slightly from the approach for EISs because under the terms of the revised 10 CFR 51.23 an EA must consider the impact determinations from the GEIS, while for an EIS the impact determinations are deemed incorporated into the EIS. Consistent with current practice, applicants will not be required to address continued storage in environmental reports submitted to support applications for issuance, renewal, or amendment of an operating license or construction permit for a nuclear power reactor under 10 CFR parts 50 and 54; issuance, renewal, or amendment of an early site permit or combined license for a nuclear power reactor under 10 CFR parts 52 and 54; or the issuance, renewal, or amendment of a license for storage of spent nuclear fuel at an ISFSI under 10 CFR part 72. The impact determinations are deemed incorporated into any EIS prepared to support issuance, renewal, or amendment of an operating license or construction permit for a nuclear power reactor under 10 CFR parts 50 and 54; issuance, renewal, or amendment of an early site permit or combined license for a nuclear power reactor under 10 CFR parts 52 and 54; or the issuance, renewal, or amendment of a license for storage of spent nuclear fuel at an ISFSI under 10 CFR part 72. The impact determinations will be considered in EAs, if the impact determinations of continued storage of spent fuel are relevant to the proposed action. The NRC is making conforming changes to 10 CFR 51.30(b), 51.50(a). 51.50(b), 51.50(c), 51.53(b), 51.53(c), 51.53(d), 51.61, 51.75(a), 51.75(b), 51.75(c), 51.80(b), 51.95(b), 51.95(c), 51.95(d), and 51.97(a) to clarify that ISFSI license renewals, reactor construction permits, and early site permits are included in the scope of the generic determination; to reflect how the generic determination will be used in future NEPA reviews; and to improve readability of the rule language.

With respect to early site permits, the NRC has consistently acknowledged its intent to apply 10 CFR 51.23 in its early site permit reviews, and this interpretation has been approved by a number of Atomic Safety and Licensing Boards. See, (e.g., *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), LBP–04–17, 60 NRC 229, 246–47 (2004); *Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site), LBP–04–18, 60 NRC 253, 268–69 (2004)). The omission of early site permits from the text of 10 CFR 51.23(b) was highlighted by a public comment (see Section D.2.3.5 of the GEIS), and the NRC has decided that clarification of its continued storage rule to explicitly include early site permits is appropriate. The NRC has further determined that the same clarification is warranted with regard to the environmental review of a construction permit application. A construction permit is issued prior to issuance of a reactor operating license; the construction permit holder can subsequently receive an operating license for the constructed facility if applicable requirements are met. *See* 10 CFR 50.23 and 50.56. Thus, like an early site permit, a construction permit is a precursor to issuance of a reactor operating license and therefore falls within the scope of licensing activities specified in 10 CFR 51.23(b) for which clarification is warranted. The NRC is therefore amending 10 CFR 51.23(b) to clarify that the rule applies to early site permits and construction permits. The NRC notes that this clarification responds to the public comments on early site permits and builds on the clarification in the proposed rule to add ISFSI license renewals to the listed actions in 10 CFR 51.23(b), thus making the rule's application to these licensing activities equally explicit. See 78 FR 56804–56805.

Given the regulatory history of the waste confidence rules, the NRC's use of the generic determination in early site permit proceedings, and the NRC's extensive discussion of the purpose and objectives of the proposed rule in the statements of consideration, the public could have reasonably ascertained that the NRC would make clarifying changes in the final rule, including the addition of early site permits and construction permits, as a natural outgrowth of the proposed rule. These changes clarify the Commission's approach to ensure consistent evaluation of the environmental impacts of continued storage in all proceedings where spent fuel impacts arising from reactor operation may be considered, including the NEPA reviews for early site permits and construction permits, and thereby fully implement the NRC's objectives for this latest rule revision.

These changes to add early site permits and construction permits do not affect and are independent of the NRC's conclusions regarding the analysis in NUREG–2157, in 10 CFR 51.23(a), or the application of 10 CFR 51.23(b) to the licensing actions specified in the proposed rule. Accordingly, the Commission has determined that the balance of the rule for which prior notice was given can function sensibly and independently without these additional changes, and therefore intends that the balance of the rule be treated as severable to the extent possible. See *MD/DC/DE Broadcasters Ass'n* v. *FCC,* 236 F.3d 13, 22 (D.C. Cir. 2001).

With respect to changes to improve the rule's readability, the revisions do not change the requirements for applicants and do not modify the substantive standards by which the NRC evaluates license applications. The changes made to address readability do not affect and are independent of the NRC's conclusions regarding the analysis in NUREG–2157 as applied in 10 CFR 51.23(a) or the application of 10 CFR 51.23(b) to the licensing actions specified in the proposed rule.

The 2010 version of 10 CFR 51.23(b) provided that no discussion of any environmental impact of spent fuel continued storage is required in any NRC EA or EIS prepared in connection

with the issuance or amendment of an operating license for a nuclear power reactor under 10 CFR parts 50 and 54; or issuance or amendment of a combined license for nuclear power reactor under 10 CFR parts 52 and 54; or the issuance of an initial license or amendment for an ISFSI under 10 CFR part 72. In practice, the NRC does include a brief discussion of the generic determination of 10 CFR 51.23 in these EISs. See, (e.g., NUREG–1947, *Final Supplemental Environmental Impact Statement for Combined License (COLs) for Vogtle Electric Generating Plant Unit 3 and 4* and NUREG–1714, *Final Environmental Impact Statement for the Construction and Operation of an Independent Spent Fuel Storage Installation on the Reservation of the Skull Valley Band of Goshute Indians and the Related Transportation Facility in Tooele County, Utah).* Under NEPA, the NRC must analyze the impacts of continued storage pending ultimate disposal for both power reactors and ISFSIs. Although the 2010 rule as worded did not require any discussion, the NRC has historically met this NEPA obligation in practice in the EISs for power reactors and ISFSIs by relying on the generic determination. Because the NRC will now be relying on the GEIS for the generic determination instead of a FONSI, the NRC needs to clarify how the generic determination will be used in future NEPA documents to ensure consistent use. Section 51.23(b) is revised to state that the impact determinations in NUREG–2157 are deemed to be incorporated into EISs and that the NRC will consider the impact determinations in EAs, if the impacts of continued storage of spent fuel are relevant to the proposed action. This means that the NRC will use the impact determinations in NUREG–2157 to evaluate the contribution of the environmental impacts of continued storage as part of the overall NEPA analysis. For agency actions that have already been taken, the NRC will not prepare new analyses or revise the existing analyses with respect to the environmental impacts of continued storage; rather, when preparing EAs and EISs for pending and future licensing actions, the NRC's review will simply consider the incorporated impact determinations along with the other environmental impacts associated with the proposed action. The revisions do not change the requirements for applicants and do not modify the substantive standards by which the NRC evaluates license applications. The changes made to clarify how the generic determination will be used in future NEPA reviews do not affect and are independent of the NRC's conclusions regarding the analysis in NUREG–2157 as applied in 10 CFR 51.23(a).

B12. What changes in this rulemaking address continued storage for license renewal?

Table B–1, ''Summary of Findings on NEPA Issues for License Renewal of Nuclear Power Plants,'' addresses the environmental impacts of license renewal activities by resource area. Table B–1 is located in appendix B to subpart A of 10 CFR part 51, ''Environmental Effect of Renewing the Operating License of a Nuclear Power Plant.'' [5] In 1996, the Commission determined that offsite radiological impacts of spent nuclear fuel and high-level waste disposal would be a Category 1 issue with no impact level assigned (61 FR 28467, 28495; June 5, 1996). The Commission analyzed the U.S. Environmental Protection Agency (EPA) generic repository standards and dose limits in existence at the time and concluded that offsite radiological impacts warranted a Category 1 determination (61 FR 28467, 28478; June 5, 1996). In its 2009 proposed rule preceding the 2013 final rule, the Commission stated its intention to reaffirm that determination. (74 FR 38117, 38127; July 31, 2009). However, when the Commission issued the 2013 final rule, which amended Table B–1—along with other 10 CFR part 51 regulations—it stated that upon finalization of the Waste Confidence rule and accompanying technical analyses, the NRC would make any necessary conforming amendments to Table B–1 (78 FR 37282, 37293; June 20, 2013).

In this current rulemaking, the NRC is revising determinations related to two environmental issues in Table B–1: Onsite storage of spent fuel during the term of an extended license (resulting from the renewal of the plant's operating license) and the offsite radiological impacts of spent nuclear fuel and high-level waste disposal. Although the GEIS for this rulemaking does not include high-level waste disposal in the analysis of impacts, it does address the technical feasibility of a repository in Appendix B of the GEIS and concludes that a geologic repository for spent fuel is technically feasible and the same analysis applies to the feasibility of geologic disposal for high-level waste.

The Table B–1 finding for ''Onsite storage of spent nuclear fuel'' is revised to add the phrase ''during the license renewal term'' in two places in the first paragraph to make clear that the SMALL impact is for the license renewal term only. Some minor clarifying changes are also made to the paragraph. The first paragraph of the column entry now reads, ''During the license renewal term, SMALL. The expected increase in the volume of spent nuclear fuel from an additional 20 years of operation can be safely accommodated onsite during the license renewal term with small environmental impacts through dry or pool storage at all plants.'' In addition, a new paragraph is added to address the impacts of onsite storage of spent fuel during the continued storage period. The second paragraph of the column entry reads, ''For the period after the licensed life for reactor operations, the impacts of onsite storage of spent nuclear fuel during the continued storage period are discussed in NUREG–2157 and as stated in 10 CFR 51.23(b), shall be deemed incorporated into this issue.'' The changes reflect that this issue covers the environmental impacts associated with the storage of spent nuclear fuel during the license renewal term as well as the period after the licensed life for reactors operations.

The Table B–1 entry for ''Offsite radiological impacts of spent nuclear fuel and high-level waste disposal'' is revised by reclassifying the impact determination as a Category 1 [6] issue with no impact level assigned. The finding column entry for this issue includes reference to the existing radiation protection standards.

Although the status of a repository, including a repository at Yucca Mountain, is uncertain and outside the scope of the generic environmental analysis conducted to support this rulemaking, the NRC believes that it is appropriate to refer to the radiation standard for Yucca Mountain because it is the current standard. The changes to these two issues finalize the Table B–1 entries that the NRC had intended to promulgate in its 2013 rulemaking, but was unable to because the 2010 Waste Confidence rule had been vacated.

While the bases for the specific conclusions in Table B–1 are found elsewhere (e.g., the 1996 rule that issued

[5] The Commission issued Table B–1 in June, 1996 (61 FR 28467; June 5, 1996). The Commission issued an additional rule in December, 1996 that made minor clarifying changes to, and added language inadvertently omitted from, Table B–1 (61 FR 66537; December 18, 1996). The NRC revised Table B–1 and other regulations in 10 CFR part 51, relating to the NRC's environmental review of a nuclear power plant's license renewal application in a 2013 rulemaking (78 FR 37282; June 20, 2013).

[6] For purposes of Table B–1, a designation as Category 1 means that the generic analysis of the issue may be adopted in each site-specific review. Category 2 means that additional plant-specific review is required.

Table B–1 and the 1996 license renewal GEIS, which provided the technical basis for that rulemaking, as reaffirmed by the 2013 rulemaking and final GEIS), the Commission has concluded in this GEIS that deep geologic disposal remains technically feasible. This rulemaking accordingly revises the entries for these two issues in Table B–1. The NRC provided notice of this revision in the **Federal Register** for the proposed rule (78 FR 56776; September 13, 2013) and received two comments on the table. See Sections D.2.3.6 and D.2.3.9 of Appendix D of the GEIS.

C. Repository and Continued Storage Conclusions

C1. What is the basis of the NRC's conclusion that a geologic repository is feasible?

The technical feasibility of a repository is addressed in Section B.2.1 of the GEIS. Technical feasibility simply means whether a geologic repository is technically possible using existing technology (i.e., without any fundamental breakthroughs in science and technology). As discussed in Section B.2.1, the consensus within the scientific and technical community engaged in nuclear waste management is that safe geologic disposal is achievable with currently available technology. Currently, 25 countries, including the United States, are considering disposal of spent or reprocessed nuclear fuel in deep geologic repositories.

As noted in Section B.2.1 of the GEIS, ongoing research in both the United States and other countries supports a conclusion that geological disposal remains technically feasible and that acceptable sites can be identified. After decades of research into various geological media, no insurmountable technical or scientific problem has emerged to challenge the conclusion that safe disposal of spent fuel and high-level radioactive waste can be achieved in a mined geologic repository. Over the past two decades, significant progress has been made in the scientific understanding and technological development needed for geologic disposal.

As discussed in Section B.2.1, activities of European countries, experience in reviewing the DOE's Yucca Mountain license application, and DOE defense-related activities at the Waste Isolation Pilot Plant all support the technical feasibility of a deep geologic repository. Based on national and international research, proposals, and experience with geological disposal, the NRC concludes that a geologic repository continues to be technically feasible.

C2. What is the basis for the NRC's conclusion that a repository will be available?

The availability of a repository is addressed in Section B.2.2 of the GEIS. Progress in development of repositories internationally provides useful experience in building confidence that the most likely scenario is that a repository can and will be developed in the United States in the short-term timeframe. Based on the examination of a number of international programs and DOE's current plans, the NRC continues to believe that 25 to 35 years is a reasonable period for repository development (i.e., candidate site selection and characterization, final site selection, licensing review, and initial construction for acceptance of waste). A discussion of international repository programs and DOE's current plans can be found in Section B.2.2 of the GEIS.

As discussed in Section B.2.2 of the GEIS, the time DOE will need to develop a repository site will depend upon a variety of factors, including Congressional action and funding. Public acceptance will also influence the time it will take to implement geologic disposal. As stated in its ''Strategy for the Management and Disposal of Used Nuclear Fuel and High-Level Radioactive Waste'' (ADAMS Accession No. ML13011A138), DOE's current plans predict that a repository will be available by 2048. Although the NRC believes that 25–35 years is a reasonable timeframe for repository development, the NRC acknowledges that there is sufficient uncertainty in this estimate that the possibility that more time will be needed cannot be ruled out. International and domestic experience clearly demonstrate that technical knowledge and experience alone are not sufficient to bring about the broad social and political acceptance needed to construct a repository. The time needed to develop a societal and political consensus for a repository could add to the time to site and license a repository or overlap it to some degree. Given this uncertainty, the GEIS evaluates a range of scenarios for the timeframe of the development of a repository, including indefinite storage. As discussed in Section B.2.2, the NRC believes that the United States will open a repository within the short-term time frame of 60 years, but, to account for all possibilities, has included a second, longer time frame as well as the scenario in which a repository never becomes available. This analysis does not constitute an endorsement of extended onsite storage of spent fuel as the appropriate long-term solution for disposition of spent fuel and high-level waste.

C3. Does the rule address the feasibility and timing of a repository?

No. As discussed in Issue 1 (see Section IV, ''Summary and Analysis of Public Comments on the Proposed Rule''), the NRC specifically sought public comment on this issue and decided not to address the feasibility and timing of a repository in the rule text itself, instead analyzing various time scenarios for repository availability in the GEIS, including the possibility that a repository will not be available. A discussion of the feasibility and timing of a repository can be found in Appendix B of the GEIS.

C4. What is the basis for the NRC's conclusion regarding safe storage of spent fuel in spent fuel pools?

Section B.3.1 of the GEIS discusses the feasibility of safe storage of spent fuel in spent fuel pools and addresses a number of technical considerations. First, the integrity of spent fuel and cladding within the environment of a spent fuel pool's controlled water chemistry is supported by operational experience and a number of scientific studies. Based on available information and operational experience as discussed in Section B.3.1.1, degradation of the fuel cladding occurs very slowly over time in the spent fuel pool environment. Degradation of the spent fuel should be minimal over the short-term storage timeframe. In the GEIS, the NRC assumes that the spent fuel pool will be decommissioned before the end of the short-term storage timeframe; however, the NRC is not aware of any information that would call into question the technical feasibility of continued safe storage of spent fuel in spent fuel pools beyond the short-term storage timeframe.

Second, the spent fuel pool's robust structural design protects against a range of natural and human-induced challenges, which are discussed in detail in Section B.3.1.2 and in the body of the GEIS. Spent fuel pools are massive seismically-designed structures that are constructed from thick, reinforced concrete walls and slabs. Section B.3.1.2 discusses a number of studies and evaluations on storage of spent fuel in a spent fuel pool and the associated accident risk. In Section B.3.1.2, the NRC concludes that the likelihood of major accidents at spent fuel pools resulting in offsite consequences is very remote. In

particular, Appendix F supports the NRC's determination that the environmental impacts from spent fuel pool fires are SMALL during the short-term storage timeframe based on the low risk of a spent fuel pool fire. As noted in Section B.3.1.2, the NRC is not aware of any study that would cause it to question the low risk of spent fuel pool accidents and thereby question the technical feasibility of continued safe storage of spent fuel in spent fuel pools for the short-term timeframe considered in the GEIS. Further, as described in Appendix E, the NRC has determined that the public health impact from potential spent fuel pool leaks is SMALL.

C5. What is the basis for the NRC's conclusion regarding safe storage of spent fuel in dry casks?

As explained in Section B.3.2 of the GEIS, the feasibility of dry cask storage is supported by years of experience and technical studies and NRC reviews that examined and confirmed the integrity of spent fuel and cladding under the controlled environment within dry cask storage systems. The technical feasibility of these systems is further supported by the robustness of the structural design of the dry cask storage system against a variety of challenges, both natural and human-induced. Based on available information and operational experience as discussed in Section B.3.2.1, degradation of the spent fuel should be minimal over the short-term storage timeframe if conditions inside the canister are appropriately maintained (e.g., consistent with the technical specifications for storage). Thus, it is expected that only routine maintenance will be needed over the short-term storage timeframe. In the GEIS, the NRC conservatively assumes that the dry casks would need to be replaced if storage continues beyond the short-term storage timeframe. The NRC assumes replacement of dry casks after 100 years of service life, even though studies and experience to date do not preclude a longer service life. Accidents associated with repackaging spent fuel are evaluated in Section 4.18, and the NRC determined that the environmental impacts are SMALL because the accident consequences would not exceed the NRC accident dose standard contained in 10 CFR 72.106. Dry cask storage systems are passive systems that are inherently robust, massive, and highly resistant to damage. To date, the NRC and licensee experience with ISFSIs and cask certification indicates that spent fuel can be safely and effectively stored using passive dry cask storage technology. As explained in Section B.3.2.2, technical studies and practical operating experience to date confirm the physical integrity of dry cask storage structures and thereby demonstrate the technical feasibility of continued safe storage in dry cask storage systems for the time periods considered in the GEIS.

As noted in Sections B.3.2.1 and B.3.2.2, the NRC is not aware of any issue that would cause it to question the technical feasibility of continued safe storage of spent fuel in dry casks for the timeframes considered in the GEIS. However, as part of continued oversight, the NRC continues to evaluate aging management programs and to monitor dry cask storage so that it can update its service life assumptions as necessary and consider any circumstances that might require repackaging spent fuel earlier than anticipated.

C6. How does the regulatory framework factor into the continued safe storage of spent fuel?

A strong regulatory framework that involves regulatory oversight, continuous improvement based on research and operating experience, and licensee compliance with regulatory requirements is important to the continued safe storage of spent fuel until repository capacity is available. As part of its oversight, the NRC can issue orders and new or amended regulations to address emerging issues that could impact the safe storage of spent fuel, as well as issue generic communications such as generic letters and information notices. The regulatory framework is discussed in Section B.3.3 of the GEIS. The NRC's upgrades of safety, environmental, and security requirements following historic events such as the September 11, 2001, terrorist attacks, and the March 11, 2011, earthquake and subsequent tsunami that struck the Fukushima Dai-ichi nuclear power plant demonstrate the NRC's capability for prompt and vigorous response to new developments that warrant increased regulatory attention. Thus, the vitality and evolution of the NRC's regulatory requirements support a reasonable conclusion that continued storage, even over extended periods of time beyond those regarded as most likely, will continue to be safe with the same or less environmental impact. Section B.3.3.1 discusses the NRC's oversight related to routine operations, accidents, and terrorist activity in more detail. Section B.3.3.2 and Appendix E discuss the NRC's response to spent fuel pool leaks and Section B.3.3.3 discusses the regulatory framework related to dry cask storage.

The NRC continues to improve its understanding of long term dry storage issues and is separately examining the regulatory framework and potential technical issues related to extended storage and subsequent transportation of spent fuel for multiple ISFSI license renewal periods extending beyond 120 years. As part of this effort, the NRC is also closely following DOE and industry efforts to study the effects of storing high burn-up spent fuel in casks. As information becomes available, the NRC will analyze the information to determine if additional or different actions are necessary. If necessary, the NRC will issue orders or enhance its regulatory requirements for storage of spent fuel, as appropriate, to continue providing adequate protection of public health and safety and the common defense and security.

As discussed in Section B.3.3.4, the NRC will continue its regulatory control and oversight of spent fuel storage through both specific and general 10 CFR part 72 licenses. Decades of operating experience and ongoing NRC inspections demonstrate that the reactor and ISFSI licensees continue to meet their obligation to safely store spent fuel in accordance with the requirements of 10 CFR parts 50, 52, and 72. If the NRC were to find noncompliance with these requirements or otherwise identify a concern with the safe storage of the spent fuel, the NRC would evaluate the issue and take whatever action or change in its regulatory program is necessary to protect the public health and safety and the environment.

Section B.3.4 concludes that the NRC believes that for the storage timeframes considered in the GEIS, regulatory oversight will continue in a manner consistent with the NRC's regulatory actions and oversight in place today to provide for continued storage of spent fuel in a safe manner until sufficient repository capacity is available for the safe disposal of all spent fuel.

C7. Does the rule address the safety of continued storage of spent fuel?

No. As discussed in Issue 2 (see Section IV, ''Summary and Analysis of Public Comments on the Proposed Rule''), the NRC specifically sought public comment on this issue and decided not to address the continued safe storage of spent fuel in the rule text itself. Appendix B of the GEIS discusses the feasibility of safe storage of spent fuel. Additionally, feasibility of continued safe storage and the regulatory framework are addressed in Questions C4, C5, and C6.

In summary, storage of spent fuel will be necessary until a repository is

available for permanent disposal. The storage of spent fuel in any combination of spent fuel pools or dry casks will continue as a licensed activity under regulatory controls and oversight. Licensees continue to develop and successfully use onsite spent fuel storage capacity in the form of spent fuel pools and dry casks in a safe and environmentally sound fashion. Technical understanding and experience continues to support the technical feasibility of safe storage of spent fuel in spent fuel pools and in dry casks, based on their physical integrity over long periods of time. However, the safety determinations associated with licensing of these activities are contained in the appropriate regulatory provision addressing licensing requirements and in the specific licenses for facilities. While those safety determinations are not the subject of this rulemaking they serve to inform the analysis of likely environmental impacts. The NRC concludes that spent fuel can continue to be safely managed in spent fuel pools and dry casks and that regulatory oversight exists to ensure the aging management programs continue to be updated to address the monitoring and maintenance of structures, systems, and components that are important to safety. Based on all of the information set forth in Appendix B of the GEIS, the NRC concludes that spent fuel can be safely managed in spent fuel pools in the short-term timeframe and dry casks during the short-term, long-term, and indefinite timeframes evaluated in the GEIS.

III. Rulemaking Procedure

Under the Administrative Procedure Act (5 U.S.C. 553(b)(A)), an agency may waive the normal notice and comment requirements if the rule is an interpretive rule, a general statement of policy, or a rule of agency organization, procedure, or practice.

As authorized by 5 U.S.C. 553(b)(A), the NRC has waived the notice and comment requirements for the additional clarifying amendments to 10 CFR 51.23(b) and conforming amendments to 10 CFR 51.50(a), 51.50(b), 51.75(a), and 51.75(b) that were not included in the proposed rule. The additional amendments expand the list of licensing proceedings for which site-specific consideration of the environmental impacts of continued storage is not needed, to include construction permits and early site permits. Paragraph 51.23(b) of 10 CFR is a rule of agency procedure and practice that governs how the NRC implements NEPA. This paragraph describes how the NRC will implement the NRC's generic determination in 10 CFR 51.23(a) in site-specific NEPA reviews in licensing proceedings (i.e., by precluding a duplicative review in an individual licensing proceeding). The changes to 10 CFR 51.23(b) do not modify the substantive standards by which the NRC will evaluate license applications and do not alter the generic determination in 10 CFR 51.23(a). Rather, the additional changes to 10 CFR 51.23(b) clarify that the generic finding in 10 CFR 51.23(a) also precludes a duplicative NRC review of the environmental effects of continued storage in early site permit and construction permit application reviews, no different than the other NRC licensing proceedings already listed in that paragraph. NEPA is a procedural statute directed at Federal agencies, and 10 CFR 51.23 (including the additional clarifying amendments) addresses the manner by which the NRC complies with NEPA with respect to the subject of continued storage. These amendments do not require action by any person or entity regulated by the NRC, nor do these amendments modify the substantive responsibilities of any person or entity regulated by the NRC. That the additional amendments do not impose any substantive responsibilities or require or prohibit action by any persons or entities regulated by the NRC is indicative of the character of the amendments as matters of NRC procedure and practice.

As authorized by 5 U.S.C. 553(b)(A), the NRC has also waived the notice and comment requirements for the additional amendments to 10 CFR 51.23(b), 51.30(b), 51.50(c), 51.53(b), 51.53(c), 51.53(d), 51.61, 51.75(c), 51.80(b), 51.95(b), 51.95(c), 51.95(d), and 51.97(a) that were not included in the proposed rule. These additional amendments are made to improve readability and to clarify how the generic determination will be used in future NEPA documents for power reactors and ISFSIs. The changes do not modify the substantive standards by which the NRC will evaluate license applications and do not alter the generic determination in 10 CFR 51.23(a). Rather, the additional changes improve the readability of the regulations to make it easier to understand and provide consistency in how the generic finding in 10 CFR 51.23(a) will be used in NRC NEPA documents. NEPA is a procedural statute directed at Federal agencies, and 10 CFR 51.23 (including the additional clarifying amendments) addresses the manner by which NRC complies with NEPA with respect to the subject of continued storage. These amendments do not require action by any person or entity regulated by the NRC, nor do these amendments change the substantive responsibilities of any person or entity regulated by the NRC. That the additional amendments do not impose any substantive responsibilities or require or prohibit action by any persons or entities regulated by the NRC is indicative of the character of the amendments as matters of NRC procedure and practice.

IV. Summary and Analysis of Public Comments on the Proposed Rule

The proposed rule was published on September 13, 2013 (78 FR 56776), for a 75-day public comment period that would have ended on November 27, 2013. The draft GEIS was also noticed for public comment on the same day. Due to the lapse in appropriations and the subsequent shutdown of the NRC, the NRC published a **Federal Register** notice on November 7, 2013 (78 FR 66858), that extended the public comment period until December 20, 2013. The NRC also held 13 public meetings during the comment period to obtain public comment on the proposed rule and draft GEIS. The NRC received 33,099 comment submissions from organizations and individuals. Of those comments, 924 represented unique comment submissions and the remainder were considered form comments sponsored by various organizations. In addition, a number of individuals provided oral comments at the public meetings that resulted in more than 1,600 pages of transcribed comments. The commenters on the proposed rule and draft GEIS included Tribal governments, State governments, industry groups, advocacy groups, licensees, and individuals. The EPA also provided comments under its authority to review EISs.

In general, there was a range of views from commenters concerning the rulemaking and draft GEIS, both in support and in opposition. Many individuals provided comments that expressed opposition to or support for nuclear power and licensing of nuclear facilities in general and comments related to actions at specific nuclear power plants. Commenters expressed concerns related to the NEPA process, continued safe storage of spent fuel, repository availability, reliance on institutional controls, costs, climate change, pool fires, pool leaks, and accidents among other things. In this section the NRC summarizes the four issues on which the NRC specifically requested input: (1) Whether specific policy statements regarding the timeline for repository availability should be

removed from the rule text; (2) whether specific policy statements regarding the safety of continued spent fuel storage should be made in the rule text given the expansive and detailed information in the draft GEIS; (3) whether the Discussion portion of the Statements of Consideration should be streamlined by removing content that is repeated from the draft GEIS in order to improve clarity of the discussion; and (4) whether the title of the rule should be changed in light of a GEIS being issued instead of a sep(arate Waste Confidence Decision. Responses to the comments received on the proposed rule and draft GEIS are provided in Appendix D of the GEIS, *Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel,* Volume 2 (ADAMS Accession No. ML14196A107). Separately, the NRC published a document containing the text of all identified unique comments, ''Comments on the Waste Confidence Draft Generic Environmental Impact Statement and Proposed Rule,'' which is located in ADAMS under Accession No. ML14154A175. This separate document provides individual comments organized by comment category, and comment author tables.

Issue 1

In the proposed rule, the NRC invited comment on whether the timeline for repository availability should be included in the rule text. Commenters were requested to comment on whether specific policy statements regarding the timeline for repository availability should be removed from the proposed rule text. A total of 13 commenters responded.

Commenters who responded to Issue 1 generally expressed support for removing a statement regarding the repository availability timeline from the rule text. Reasons for this support varied, but commonly included a lack of NRC control over repository timelines; previous failures to predict when a repository would become available; the inadequacy of a basis for any particular timeline; that a timeline is not required under NEPA; and the concern that including a statement about repository availability ties the United States to repository disposal of spent fuel to the exclusion of reprocessing or other options.

The few commenters who expressed support for retaining a statement regarding the timeline for repository availability indicated that the timeline is an important element of the ''contract'' the public has with the nuclear industry; that the availability of a repository is the most critical issue affecting long-term dry cask storage; that inclusion of a statement regarding repository availability in the rule text indicates the importance the Commission places on this key assumption of the GEIS; and that these findings are useful in framing the NRC's assessment of the safety and environmental impacts of continued storage.

After considering the comments, the NRC has decided not to retain the timeline in the rule text. With the development of the GEIS, the relationship between repository availability and the consideration of environmental impacts from continued storage has changed from previous proceedings. In previous proceedings, the date of future repository availability was the end point of the temporal scope of the NRC's analysis of the environmental impacts from continued storage. In this rulemaking, there is no end point to the temporal scope of the NRC's analysis of the environmental impacts of continued storage. Further, the NRC agrees that there is no legal requirement to include a timeline in the rule text. Although future repository availability remains an important consideration because it provides an eventual disposition path for spent fuel, there no longer is a need to provide a time limit for the environmental impacts analysis. To support the analysis in the GEIS, the NRC has determined that a repository is technically feasible and that it is technically feasible to safely store the spent fuel. The removal of a timeframe from the rule language does not mean that the Commission is endorsing indefinite storage of spent fuel. The United States national policy remains disposal of spent fuel in a geologic repository, and, as stated in the GEIS, the NRC believes that the most likely scenario is that a repository will become available by the end of the short-term timeframe (60 years beyond the licensed life for operation of a reactor).

Further, the GEIS recognizes the uncertainty inherent in predicting when a repository will become available. It therefore contains an analysis of two additional timeframes: A long-term timeframe that contemplates an additional 100 years of storage and an indefinite timeframe that looks at the environmental impacts that could occur if a repository never becomes available. Appendix B of the GEIS and Section II.C of this notice contain a discussion of repository feasibility.

Issue 2

In the proposed rule, the NRC invited comment on the issue of including statements regarding the safety of continued spent fuel storage in the rule text. Commenters were requested to comment on whether specific policy statements regarding the safety of continued spent fuel storage should be made in the rule text given the expansive and detailed information in the GEIS. A total of 13 commenters provided responses to the specific question on this subject.

Commenters who responded to Issue 2 generally expressed support for making a policy statement regarding safety of continued storage in the rule text. However, their reasons varied widely. Some commenters indicated that including a statement about safety enhanced openness and transparency or supported the language because storage is, in fact, safe. Other commenters indicated that it should be included because safety determinations are more important to NRC decisions and to members of the public than environmental issues in spent fuel matters; because the public should have the benefit of the NRC's determination that spent fuel may be stored for extended periods with reasonable assurance of safety; because a safety statement would facilitate opposition to nuclear power; because it is consistent with the long-standing approach to addressing continued storage; and because it addresses legal precedents.

Commenters who opposed a policy statement regarding safety of continued storage in the rule text asserted that a statement is unnecessary to the rule; that it is not possible to project the future safety of spent fuel storage; that statements related to safety of spent fuel storage are entirely unrelated and unnecessary to the intended purpose of the rule; and that there are too many unknowns and open issues related to storage that must be resolved before any statement regarding safety can be made.

After considering the comments, the NRC has decided not to make a policy statement about safe storage in the rule text. The generic conclusion that spent fuel can be stored safely beyond the operating life of a power reactor has been a component of all past Waste Confidence proceedings. However, this continued storage rulemaking proceeding is markedly different from past proceedings. Unlike earlier proceedings, the NRC has prepared a GEIS that analyzes the impacts of continued storage of spent fuel. The GEIS fulfills the NRC's NEPA obligations and provides a regulatory basis for the rule rather than addressing the agency's responsibilities to protect public health and safety under the Atomic Energy Act (AEA), of 1954 as

amended. Further, Appendix B of the GEIS discusses the technical feasibility of continued safe storage. It is important to note that, in adopting revised 10 CFR 51.23 and publishing the GEIS, the NRC is not making a safety determination under the AEA to allow for the continued storage of spent fuel. AEA safety determinations associated with licensing of these activities are contained in the appropriate regulatory provision addressing licensing requirements and in the specific licenses for facilities. Further, there is not any legal requirement for the NRC to codify a generic safety conclusion in the rule text. By not including a safety policy statement in the rule text, the NRC does not imply that spent fuel cannot be stored safely. To the contrary, the analysis documented in the GEIS is predicated on the ability to store spent fuel safely over the short-term, long-term, and indefinite timeframes. This understanding is based upon the technical feasibility analysis in Appendix B of the GEIS and the NRC's decades-long experience with spent fuel storage and development of regulatory requirements for licensing of storage facilities that are focused on safe operation of such facilities, which have provided substantial technical knowledge about storage of spent fuel. Further, spent fuel is currently being stored safely at reactor and storage sites across the country, which supports the NRC's conclusion that it is feasible for spent fuel to be stored safely for the timeframes considered in the GEIS. Appendix B of the GEIS and Section II.C of this notice contain a discussion of the technical feasibility and regulatory framework that supports continued safe storage.

Issue 3

In the proposed rule, the NRC invited comment on the issue of streamlining the Statements of Consideration. Commenters were specifically requested to comment on whether the Discussion portion of the Statements of Consideration should be streamlined by removing content that is repeated from the draft GEIS to improve clarity of the discussion. A total of 13 commenters provided responses to the specific question on this subject.

Commenters who responded to Issue 3 provided both support and opposition for streamlining. Commenters who supported streamlining did so most frequently because it would improve clarity or because it would reduce redundancy. Other reasons included that lengthy **Federal Register** notices are burdensome to search and that streamlining could remove anachronisms.

Commenters who opposed streamlining most commonly did so because the information in the Discussion section supports the rule or provides a plain-language explanation of matters in the rule. Other commenters opposed streamlining because it would introduce changes upon which the public has not been able to comment; because the Statements of Consideration should address findings that the NRC historically included as part of the Waste Confidence Decision; and because the **Federal Register** is more readily available to the public and is easier to search than the GEIS. Commenters indicated that the Statements of Consideration should contain enough information that it can be used as a stand-alone document.

After considering the comments and looking at ways to be more concise in presenting the information, the NRC has streamlined the Statements of Consideration where it is appropriate to do so without removing text necessary to explain the action that the NRC is taking. As noted in the comments, the **Federal Register** notice for the rule must contain enough information to explain the matters in the rule; however, it does not need to be a stand-alone document. The GEIS provides a regulatory basis for the rule and not everything in the GEIS needs to be addressed in the Statements of Consideration. Some redundancy with the GEIS remains to ensure adequate information is present to explain the nature and intent of the rule. After streamlining, the Statements of Consideration still contains sufficient information in plain language to provide the reader with an understanding of the nature and intent of the rule.

Issue 4

In the proposed rule, the NRC invited comment on changing the rule title. Commenters were requested to comment on whether the title of the rule should be changed in light of a GEIS being issued instead of a separate Waste Confidence Decision. A total of 13 commenters provided responses to the specific question on this subject.

Commenters who responded to Issue 4 expressed near-unanimous support for changing the title of the rule. Reasons for support, however, varied widely. Commenters indicated an array of reasons to support changing the rule name, including that the name is an anachronism; that the title is misleading and provides no useful description of the revised rule's purpose or intent; that the title shows a lack of transparency; that historical findings of confidence have proven erroneous; that confidence does not exist; that the U.S. Court of Appeals for the District of Columbia Circuit invalidated confidence as a basis for the rule; that the title should be changed to reflect the evolving rulemaking process (no separate Waste Confidence Decision and reliance on the GEIS); and that confidence requires transfer of all fuel to dry casks and a defined and available end point. Many other commenters—who did not expressly respond to this issue—expressed views that ''waste confidence'' is a confusing term or that it conveys a confidence that does not exist. Commenters noted that with a clearer title, the purpose and limited application of the rule would be more evident to members of the public who are not aware of the historical basis for the term ''waste confidence.'' Commenters suggested that the title should more accurately reflect the true Federal action of licensing and relicensing of reactors and ISFSIs and should accurately reflect the purpose of the analysis, evaluation, and conclusions of the study. Suggestions for a new title included ''Storage of SNF [Spent Nuclear Fuel] after Licensed Term of Operations'' and ''Storage of Spent Nuclear Fuel for the Period After License Term of Reactor Operation.''

Only one commenter who responded to this issue expressed opposition to revising the title. The commenter was opposed to changing the title because waste confidence is what the rulemaking has historically been about and the rule should still be about confidence that a repository will be available.

After considering the comments, the NRC has decided to change the title of the rule. The title of a rule should convey the nature and content of the rule. This rule represents a change in the format from past Waste Confidence proceedings. Because of the decades of experience with safely storing spent fuel and the fact that the Commission has issued a GEIS to support the rule, which provides a detailed analysis of the environmental impacts associated with continued storage, the nature of the rule has changed and the need for a separate Waste Confidence Decision no longer exists. The rule codifies the environmental impact of continued storage of spent fuel beyond the licensed life for operation of a reactor at 10 CFR 51.23(a). The rule is used in reactor and ISFSI licensing and relicensing proceedings to address the environmental impacts of storage of spent fuel for the period after the licensed life for operation of the reactor and before disposal. Including ''waste

confidence'' in the title of the proposed rule was intended to bridge past rulemakings on the topic to the current effort, recognizing that there is no separate Waste Confidence Decision included in the current proceeding. However, it is clear from the comments that using the historical term ''waste confidence'' in the title has caused some confusion. The NRC agrees that a title that more accurately reflects the content is more appropriate. Therefore, the NRC has changed the title of this notice to ''Continued Storage of Spent Nuclear Fuel.'' The title of the GEIS was also changed accordingly.

V. Discussion of Final Amendments by Section

§ 51.23 Environmental Impacts of Continued Storage of Spent Nuclear Fuel Beyond the Licensed Life for Operation of a Reactor

The heading of the section is revised to reflect that the section is no longer based on an EA and FONSI, but on an EIS and that environmental effects of continued storage are included in the section.

Paragraph (a) of 10 CFR 51.23 is revised to provide the Commission's generic determination of the environmental impacts on the continued storage of spent fuel. The amendments state that the Commission has generically determined that the environmental impacts of continued storage of spent nuclear fuel beyond the licensed life for operation of a reactor are those impacts identified in NUREG–2157.

Paragraph (b) of 10 CFR 51.23 is revised to clarify that ISFSI renewals, reactor construction permits, and early site permits are included in the scope of the generic determination. The final rule also makes changes to improve readability and by providing additional clarity regarding the application of the generic determination in 10 CFR 51.23(a) in future NRC NEPA reviews. Provisions applicable to applicants and the NRC are separated to make it clear that applicants do not need to address continued storage and that for the NRC's NEPA documents the impact determinations in NUREG–2157 are deemed incorporated into EISs and will be considered in EAs, if the impacts of continued storage of spent fuel are relevant to the proposed action.

§ 51.30 Environmental Assessment

Paragraph (b) is revised to clarify that EAs will consider the generic impact determinations in NUREG–2157, if the impacts of continued storage of spent fuel are relevant to the proposed action.

§ 51.50 Environmental Report—Construction Permit, Early Site Permit, or Combined License Stage

Section 51.50 is revised to clarify that construction permits, early site permits, and combined licenses are included in the scope of the generic determination in § 51.23 and that the applicants' environmental reports do not need to discuss the impacts of continued storage.

§ 51.53 Postconstruction Environmental Reports

Section 51.53 is revised to improve readability and to clarify that applicants' postconstruction environmental reports do not need to discuss the impacts of continued storage.

§ 51.61 Environmental Report—Independent Spent Fuel Storage Installation (ISFSI) or Monitored Retrievable Storage Installation (MRS) License

Section 51.61 is revised to clarify that ISFSI renewals are included in the scope of the generic determination in § 51.23, to improve readability, and to clarify that an applicant's ISFSI environmental report does not need to discuss the impacts of continued storage.

§ 51.75 Draft Environmental Impact Statement—Construction Permit, Early Site Permit, or Combined License

Section 51.75 is revised to clarify that construction permits and early site permits are included in the scope of the generic determination in § 51.23 and that the impact determinations on continued storage that are in NUREG–2157 are deemed to be incorporated into the draft EIS. Although footnote 5 is included in the regulatory text, it is not being amended but is included to meet an Office of the Federal Register publication requirement.

§ 51.80 Draft Environmental Impact Statement—Materials License

Paragraph (b) is revised to clarify that ISFSI renewals are included in the scope of the generic determination in § 51.23 and to improve readability. Paragraph (b) is further revised to clarify that the impact determinations on continued storage that are in NUREG–2157 are deemed to be incorporated into the EIS.

§ 51.95 Postconstruction Environmental Impact Statements

Paragraphs (b), (c), and (d) are revised to clarify that the impact determinations on continued storage that are in NUREG–2157 are deemed to be incorporated into the EIS or considered in the EA, if the impacts of continued storage of spent fuel are applicable to the proposed action.

§ 51.97 Final Environmental Impact Statement—Materials License

Paragraph (a) is revised to clarify that ISFSI renewals are included in the scope of the generic determination in § 51.23 and to improve readability. Paragraph (a) is further revised to clarify that the impact determinations on continued storage that are in NUREG–2157 are deemed to be incorporated into the EIS.

Table B–1—Summary of Findings on NEPA Issues for License Renewal of Nuclear Power Plants

Table B–1 addresses the environmental impacts of license renewal activities by resource area. When the Commission issued the final rule on the environmental effects of license renewal (78 FR 37282; June 20, 2013), it was not able to rely on the Waste Confidence rule for two of the issues. The Commission noted that upon issuance of the GEIS and rule, the NRC would make any necessary conforming changes to the license renewal rule. This final rule revises these two Table B–1 finding column entries under the Waste Management section to address onsite storage and offsite radiological impact of disposal. The ''Offsite radiological impacts of spent nuclear fuel and high-level waste disposal'' issue is reclassified as a Category 1 issue with no impact level assigned and the finding column entry is revised to include reference to the existing radiation protection standards. For the ''Onsite storage of spent nuclear fuel'' issue, the finding column entry is revised to address the impacts of onsite storage during the license renewal term and during the continued storage period. Additionally, footnote 7 of Table B–1 is removed. Although footnotes 1, 2, and 3 are included in the regulatory text, they are not being amended but are included to meet an Office of the Federal Register publication requirement.

VI. Availability of Documents

The documents identified in the following table are available to interested persons either through ADAMS or the Web address provided, as indicated.

Document	PDR	Web (*www.regulations.gov* unless otherwise indicated)	ADAMS
NRC Documents			
Federal Register notice—Extension of Comment Period (78 FR 66858; November 7, 2013).	X	X	ML13294A398.
Federal Register notice—Waste Confidence—Continued Storage of Spent Nuclear Fuel; Proposed Rule (78 FR 56776; September 13, 2013).	X	X	ML13256A004.
NUREG–2157, ''Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel'' Vol. 1.	X	X	ML14196A105.
NUREG–2157, ''Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel'' Vol. 2.	X	X	ML14196A107.
''Comments on the Waste Confidence Draft Generic Environmental Impact Statement and Proposed Rule''.	X	X	ML14154A175.
Draft NUREG–2157, ''Waste Confidence Generic Environmental Impact Statement''.	X	X	ML13224A106.
Federal Register notice announcing the 1977 Denial of PRM–50–18 (42 FR 34391; July 5, 1977).	X		ML13294A161.
Federal Register notice announcing generic proceeding on Waste Confidence (44 FR 61372, 61373; October 25, 1979).	X		
Federal Register notice—1984 Waste Confidence Final Rule (49 FR 34688; August 31, 1984).	X		ML033000242.
Federal Register notice—1984 Final Waste Confidence Decision (49 FR 34658; August 31, 1984).	X		ML033000242.
Federal Register notice—1990 Waste Confidence Final Rule (55 FR 38472; September 18, 1990).	X		ML031700063.
Federal Register notice—1990 Waste Confidence Decision (55 FR 38474; September 18, 1990).	X		ML031700063.
Federal Register notice—1999 Waste Confidence Decision Review (64 FR 68005; December 6, 1999).	X		ML003676331.
Federal Register notice—''Licenses, Certifications, and Approvals for Nuclear Power Plants'' (72 FR 49352; August 8, 2007).	X		ML063060337.
Federal Register notice—2010 Waste Confidence Final Rule (75 FR 81037; December 23, 2010).	X		ML103350175.
Federal Register notice—2010 Waste Confidence Decision Update (75 FR 81032; December 23, 2010).	X		ML120970147.
Federal Register notice—License Renewal GEIS Final Rule (78 FR 37282: June, 20, 2013).	X		ML13101A059.
COMSECY–12–0016—Approach for Addressing Policy Issues Resulting from Court Decision to Vacate Waste Confidence Decision and Rule (June 9, 2012).	X		ML12180A424.
SRM–COMSECY–12–0016—Approach for Addressing Policy Issues Resulting from Court Decision to Vacate Waste Confidence Decision and Rule (September 6, 2012).	X		ML12250A032.
Luminant Generation Co. LLC (Comanche Peak Nuclear Power Plant, Units 3 and 4), et al., CLI–12–7, 75 NRC 379, 391–92 (March 16, 2012).	X		ML12076A190.
NUREG 1947, ''Final Supplemental Environmental Impact Statement for Combined License (COLs) for Vogtle Electric Generating Plant Unit 3 and 4''.	X		ML11076A010.
NUREG–1714, Volume 1, ''Final Environmental Impact Statement for the Construction and Operation of an Independent Spent Fuel Storage Installation on the Reservation of the Skull Valley Band of Goshute Indians and the Related Transportation Facility in Tooele County, Utah''.	X		ML020150170.
Exelon Generation Co., LLC (Early Site Permit for Clinton ESP Site), LBP–04–17, 60 NRC 229, 246–47 (August 6, 2004).	X		ML042260071.
Dominion Nuclear North Anna, LLC (Early Site Permit for North Anna ESP Site), LBP–04–18, 60 NRC 253, 268–69 (August 6, 2004).	X		ML042260064.
Non-NRC Documents			
NRDC v. *NRC,* 582 F.2d 166 (2d Cir. 1978)		*http://scholar.google.com/scholar_case?case=1292280692394324643* Note: This link directs the reader to an unofficial copy of this case.	

Document	PDR	Web (*www.regulations.gov* unless otherwise indicated)	ADAMS
Minnesota v. *NRC,* 602 F.2d 412 (D.C. Cir. 1979)		*http://scholar.google.com/scholar_case?case=1554474921785189941* Note: This link directs the reader to an unofficial copy of this case.	
Marsh v. *Oregon Natural Resources Council,* 490 U.S. 360, 374 (1989).		*http://scholar.google.com/scholar_case?case=10887052189863115558&q* Note: This link directs the reader to an unofficial copy of this case.	
MD/DC/DE Broadcasters Ass'n v. *FCC,* 236 F.3d 13, 22 (D.C. Cir. 2001).		*http://scholar.google.com/scholar_case?case=4929117322249877509&q=MD/DC/DE+Broadcasters+Ass%27n+v.+FCC&hl=en&as_sdt=20000006* Note: This link directs the reader to an official copy of the case.	
Village of Bensenville v. *Federal Aviation Administration,* 457 F.3d 52, 71–72 (D.C. Cir. 2006).		*http://scholar.google.com/scholar_case?case=6559910666849441800&q=Village+of+Benenville&hl=en&as_sdt=20000003* Note: This link directs the reader to an unofficial copy of the case.	
New York v. *NRC,* 681 F.3d 471 (D.C. Cir. 2012)			ML12191A407.
DOE, Strategy for the Management and Disposal of Used Nuclear Fuel and High-Level Radioactive Waste.	X		ML13011A138.

VII. Agreement State Compatibility

Under the ''Policy Statement on Adequacy and Compatibility of Agreement State Programs,'' approved by the Commission on June 20, 1997, and published in the **Federal Register** (62 FR 46517; September 3, 1997), this rule is classified as compatibility ''NRC.'' Compatibility is not required for Category ''NRC'' regulations. The NRC program elements in this category are those that relate directly to areas of regulation reserved to the NRC by the AEA or the provisions of Title 10 of the *Code of Federal Regulations,* and although an Agreement State may not adopt program elements reserved to the NRC, it may wish to inform its licensees of certain requirements via a mechanism that is consistent with a particular State's administrative procedure laws, but does not confer regulatory authority on the State.

IX. Voluntary Consensus Standards

The National Technology Transfer and Advancement Act of 1995 (Pub. L. 104–113) requires that Federal agencies use technical standards that are developed or adopted by voluntary consensus standards bodies unless the use of such a standard is inconsistent with applicable law or otherwise impractical. In this final rule, the NRC is modifying its generic determination on the consideration of environmental impacts of continued storage of spent fuel beyond the licensed life for reactor operations. The NRC is not aware of any voluntary consensus standards that address the subject matter of this final rule. This action does not constitute the establishment of a standard that contains generally applicable requirements.

X. Record of Decision

The NRC has decided to adopt the proposed revision to 10 CFR 51.23 and additional conforming changes. This revision codifies the NRC's analyses and determinations regarding the environmental impacts of continued storage, which are documented in NUREG–2157. The NRC prepared NUREG–2157 in accordance with its NEPA guidance for preparation of an environmental impact statement, from scoping and issuance of the draft to receipt and consideration of public comments in the final generic environmental impact statement. The NRC has concluded that these analyses and determinations meet the NRC's NEPA obligations with respect to continued storage and thereby provide a regulatory basis for this revision to 10 CFR 51.23. Section 51.23(a) adopts into regulation the generic environmental impact determinations of NUREG–2157, and section 51.23(b) provides that the environmental impacts disclosed in NUREG–2157 will be deemed incorporated into future EISs and considered in future EAs, if the impacts of continued storage are relevant to the proposed action, to be considered by the decision-makers in those proceedings.

The NRC's considerations in reaching this decision to adopt a rule are discussed in more detail in the following sections of NUREG–2157: The proposed action in Section 1.4, the purpose of and need for the proposed action in Section 1.5, the no-action alternative and options in Section 1.6, the alternatives considered and eliminated in Section 1.6.2, and the costs and benefits of the proposed action and options under the no action alternative in Chapter 7 [7] with supporting information in Appendix H. These portions of the GEIS inform the public and decision-makers of the environmental implications of this action.

The NRC's rulemaking action provides efficient processes for use in NRC licensing proceedings and reviews to address the environmental impacts of continued storage, consistent with the historic efficiencies provided by prior rules codified at 10 CFR 51.23. In COMSECY–12–0016, the NRC considered a number of alternative options and tracks to provide processes to address these environmental impacts in licensing and to preserve the efficiencies historically provided by 10 CFR 51.23. As documented in the SRM for COMSECY–12–0016, the Commission chose to pursue this combination of a rulemaking to revise 10 CFR 51.23 and a generic environmental impact statement to provide a regulatory basis for that rulemaking. As discussed in Section 1.6 of NUREG–2157, none of the options under the no-action alternative

[7] The inclusion of a cost-benefit analysis for the proposed action in Chapter 7 is consistent with NRC guidance for preparation of an environmental impact statement. The costs of continued storage activities and facilities are disclosed in Chapter 2, while the benefit that accrues from the specific action resulting in the need to store spent fuel (i.e., production of electrical power) will be discussed in the environmental assessment or impact statement prepared in connection with the request for authorization of that action, which will incorporate the impact determinations of NUREG–2157.

considered in the generic environmental impact statement could achieve the NRC's purpose of preserving the efficiency of its licensing proceedings with respect to the analysis of the impacts of continued storage; the only alternative left was no action. In the event of no action, NEPA would nonetheless require the NRC to consider the environmental impacts of continued storage for many future licensing actions. In Section 1.6, the NRC considered options for meeting that obligation without this rulemaking. The adopted rulemaking action and the options under the no action alternative are all administrative in nature and have no significant environmental impacts. Therefore, there is no environmentally preferable alternative and there is no environmental harm caused by this rulemaking action for the NRC to avoid or minimize.

The costs and benefits of this rulemaking and the various options in the event of no action are discussed in Chapter 7 of NUREG–2157. As that discussion indicates, the primary advantage of this rulemaking is that costs are significantly lower than the costs of the NRC's options in the case of no action. The NRC's other options each incur costs associated with repetitive site-specific licensing proceedings for issues related to the environmental impacts of continued storage as well as other potentially large, unquantified costs. The NRC's adoption of the rule is consistent with Council on Environmental Quality (CEQ) guidance regarding efficiency and timeliness under NEPA (77 FR 14473). The NRC acknowledges that some—but not all—members of the public view as benefits that (1) these no action options would provide the opportunity to challenge impact determinations in individual licensing proceedings without a waiver under 10 CFR 2.335 and (2) some proceedings may include site-specific reviews of the environmental impacts of continued storage. However, the NRC concludes that the cost savings and efficiency afforded by this rulemaking outweigh those perceived benefits and notes that the waiver provision in 10 CFR 2.335 would permit challenge to the application of this rule in appropriate circumstances. The NRC has therefore decided to issue this rule to avoid significant and unnecessary costs in conformity with the CEQ policy favoring efficiency in agency environmental reviews.

As this discussion indicates, this rulemaking is procedural in nature and has no significant environmental impacts. In addition, this rulemaking is an amendment to 10 CFR part 51 that relates to procedures for filing and reviewing requests for licensing actions. Therefore, the adoption of this rule qualifies for the categorical exclusion under 10 CFR 51.22(c)(3)(i) from the requirement to prepare an environmental assessment or impact statement. Nonetheless, the NRC has provided substantial information about this action in NUREG–2157, and the NRC is now issuing this record of decision.

XI. Paperwork Reduction Act Statement

This final rule does not contain new or amended information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing information collection requirements were approved by the Office of Management and Budget, control number 3150–0021.

Public Protection Notification

The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid Office of Management and Budget control number.

XII. Regulatory Analysis

A regulatory analysis has not been prepared for this regulation because this regulation does not establish any requirements that would place a burden on licensees. A cost-benefit analysis of the alternative options considered by the NRC was prepared as part of the GEIS (Chapter 7). If continued storage must be assessed in site-specific licensing actions, the primary costs are incurred by the NRC and licensees and license applicants. Licensees and license applicants ultimately shoulder the majority of costs incurred to the NRC in the course of licensing actions through the NRC's license-fee program. Costs also accrue through the NRC's adjudicatory activities, which affect the NRC, licensees, license applicants, and petitioners or participants in the proceeding. The GEIS contains an estimate that it could cost $27.3 million in constant dollars to address continued storage in site-specific proceedings.

XIII. Regulatory Flexibility Certification

In accordance with the Regulatory Flexibility Act of 1980 (5 U.S.C. 605(b)), the NRC certifies that this rule does not have a significant economic impact on a substantial number of small entities. The final rule modifies the generic determination regarding the consideration of environmental impacts of continued storage. This generic determination provides that the impact determinations from NUREG–2157 will be incorporated into EISs, EAs, or any other analysis prepared in connection with certain actions. The final rule affects only the licensing of nuclear power plants or ISFSIs. Entities seeking or holding NRC licenses for these facilities do not fall within the scope of the definition of ''small entities'' set forth in the Regulatory Flexibility Act or the size standards established by the NRC (10 CFR 2.810).

XIV. Plain Writing

The Plain Writing Act of 2010 (Pub. L. 111–274) requires Federal agencies to write documents in a clear, concise, and well-organized manner. The NRC has written this document to be consistent with the Plain Writing Act as well as the Presidential Memorandum, ''Plain Language in Government Writing,'' published June 10, 1998 (63 FR 31885).

XV. Backfitting and Issue Finality

The NRC has determined that the backfit rules (§§ 50.109, 70.76, 72.62, or 76.76) and the issue finality provisions in 10 CFR part 52 do not apply to this final rule because this amendment does not involve any provisions that will either impose backfits as defined in 10 CFR chapter I, or represent non-compliance with the issue finality of provisions in 10 CFR part 52. Therefore, a backfit analysis is not required for this final rule, and the NRC did not prepare a backfit analysis for this final rule.

XVI. Congressional Review Act

In accordance with the Congressional Review Act of 1996 (5 U.S.C. 801–808), the NRC has determined that this action is not a major rule and has verified this determination with the Office of Information and Regulatory Affairs of the Office of Management and Budget.

List of Subjects in 10 CFR Part 51

Administrative practice and procedure, Environmental impact statement, Nuclear materials, Nuclear power plants and reactors, Reporting and recordkeeping requirements.

For the reasons set out in the preamble and under the authority of the Atomic Energy Act of 1954, as amended; the Energy Reorganization Act of 1974, as amended; and 5 U.S.C. 552 and 553; the NRC is adopting the following amendments to 10 CFR part 51.

PART 51—ENVIRONMENTAL PROTECTION REGULATIONS FOR DOMESTIC LICENSING AND RELATED REGULATORY FUNCTIONS

■ 1. The authority citation for part 51 continues to read as follows:

Authority: Atomic Energy Act sec. 161, 1701 (42 U.S.C. 2201, 2297f); Energy Reorganization Act secs. 201, 202, 211 (42 U.S.C. 5841, 5842, 5851); Government Paperwork Elimination Act sec. 1704 (44 U.S.C. 3504 note). Subpart A also issued under National Environmental Policy Act secs. 102, 104, 105 (42 U.S.C. 4332, 4334, 4335); Pub. L. 95–604, Title II, 92 Stat. 3033–3041; Atomic Energy Act sec. 193 (42 U.S.C. 2243). Sections 51.20, 51.30, 51.60, 51.80. and 51.97 also issued under Nuclear Waste Policy Act secs. 135, 141, 148 (42 U.S.C. 10155, 10161, 10168). Section 51.22 also issued under Atomic Energy Act sec. 274 (42 U.S.C. 2021) and under Nuclear Waste Policy Act sec. 121 (42 U.S.C. 10141). Sections 51.43, 51.67, and 51.109 also issued under Nuclear Waste Policy Act sec. 114(f) (42 U.S.C. 10134(f)).

■ 2. In § 51.23, revise the section heading and paragraphs (a) and (b) to read as follows:

§ 51.23 Environmental impacts of continued storage of spent nuclear fuel beyond the licensed life for operation of a reactor.

(a) The Commission has generically determined that the environmental impacts of continued storage of spent nuclear fuel beyond the licensed life for operation of a reactor are those impacts identified in NUREG–2157, ''Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel.''

(b) The environmental reports described in §§ 51.50, 51.53, and 51.61 are not required to discuss the environmental impacts of spent nuclear fuel storage in a reactor facility storage pool or an ISFSI for the period following the term of the reactor operating license, reactor combined license, or ISFSI license. The impact determinations in NUREG–2157 regarding continued storage shall be deemed incorporated into the environmental impact statements described in §§ 51.75, 51.80(b), 51.95, and 51.97(a). The impact determinations in NUREG–2157 regarding continued storage shall be considered in the environmental assessments described in §§ 51.30(b) and 51.95(d), if the impacts of continued storage of spent fuel are relevant to the proposed action.

* * * * *

■ 3. In § 51.30, revise paragraph (b) to read as follows:

§ 51.30 Environmental assessment.

* * * * *

(b) As stated in § 51.23, the generic impact determinations regarding the continued storage of spent fuel in NUREG–2157 shall be considered in the environmental assessment, if the impacts of continued storage of spent fuel are relevant to the proposed action.

* * * * *

■ 4. In § 51.50, revise paragraphs (a), (b)(2), and (c) introductory text to read as follows:

§ 51.50 Environmental report—construction permit, early site permit, or combined license stage.

(a) *Construction permit stage.* Each applicant for a permit to construct a production or utilization facility covered by § 51.20 shall submit with its application a separate document, entitled ''Applicant's Environmental Report—Construction Permit Stage,'' which shall contain the information specified in §§ 51.45, 51.51, and 51.52. Each environmental report shall identify procedures for reporting and keeping records of environmental data, and any conditions and monitoring requirements for protecting the non-aquatic environment, proposed for possible inclusion in the license as environmental conditions in accordance with § 50.36b of this chapter. As stated in § 51.23, no discussion of the environmental impacts of the continued storage of spent fuel is required in this report.

(b) * * *

(2) The environmental report may address one or more of the environmental effects of construction and operation of a reactor, or reactors, which have design characteristics that fall within the site characteristics and design parameters for the early site permit application, provided however, that the environmental report must address all environmental effects of construction and operation necessary to determine whether there is any obviously superior alternative to the site proposed. The environmental report need not include an assessment of the economic, technical, or other benefits (for example, need for power) and costs of the proposed action or an evaluation of alternative energy sources. As stated in § 51.23, no discussion of the environmental impacts of the continued storage of spent fuel is required in this report.

* * * * *

(c) *Combined license stage.* Each applicant for a combined license shall submit with its application a separate document, entitled ''Applicant's Environmental Report—Combined License Stage.'' Each environmental report shall contain the information specified in §§ 51.45, 51.51, and 51.52, as modified in this paragraph. For other than light-water-cooled nuclear power reactors, the environmental report shall contain the basis for evaluating the contribution of the environmental effects of fuel cycle activities for the nuclear power reactor. Each environmental report shall identify procedures for reporting and keeping records of environmental data, and any conditions and monitoring requirements for protecting the non-aquatic environment, proposed for possible inclusion in the license as environmental conditions in accordance with § 50.36b of this chapter. The combined license environmental report may reference information contained in a final environmental document previously prepared by the NRC staff. As stated in § 51.23, no discussion of the environmental impacts of the continued storage of spent fuel is required in this report.

* * * * *

■ 5. In § 51.53, revise paragraphs (b), (c)(2), and (d) to read as follows:

§ 51.53 Postconstruction environmental reports.

* * * * *

(b) *Operating license stage.* Each applicant for a license to operate a production or utilization facility covered by § 51.20 shall submit with its application a separate document entitled ''Supplement to Applicant's Environmental Report—Operating License Stage,'' which will update ''Applicant's Environmental Report—Construction Permit Stage.'' Unless otherwise required by the Commission, the applicant for an operating license for a nuclear power reactor shall submit this report only in connection with the first licensing action authorizing full-power operation. In this report, the applicant shall discuss the same matters described in §§ 51.45, 51.51, and 51.52, but only to the extent that they differ from those discussed or reflect new information in addition to that discussed in the final environmental impact statement prepared by the Commission in connection with the construction permit. No discussion of need for power, or of alternative energy sources, or of alternative sites for the facility, is required in this report. As stated in § 51.23, no discussion of the environmental impacts of the continued storage of spent fuel is required in this report.

(c) * * *

(2) The report must contain a description of the proposed action, including the applicant's plans to

modify the facility or its administrative control procedures as described in accordance with § 54.21 of this chapter. This report must describe in detail the affected environment around the plant, the modifications directly affecting the environment or any plant effluents, and any planned refurbishment activities. In addition, the applicant shall discuss in this report the environmental impacts of alternatives and any other matters described in § 51.45. The report is not required to include discussion of need for power or the economic costs and economic benefits of the proposed action or of alternatives to the proposed action except insofar as such costs and benefits are either essential for a determination regarding the inclusion of an alternative in the range of alternatives considered or relevant to mitigation. The environmental report need not discuss other issues not related to the environmental effects of the proposed action and the alternatives. As stated in § 51.23, no discussion of the environmental impacts of the continued storage of spent fuel is required in this report.

* * * * *

(d) *Postoperating license stage.* Each applicant for a license amendment authorizing decommissioning activities for a production or utilization facility either for unrestricted use or based on continuing use restrictions applicable to the site; and each applicant for a license amendment approving a license termination plan or decommissioning plan under § 50.82 of this chapter either for unrestricted use or based on continuing use restrictions applicable to the site; and each applicant for a license or license amendment to store spent fuel at a nuclear power reactor after expiration of the operating license for the nuclear power reactor shall submit with its application a separate document, entitled ''Supplement to Applicant's Environmental Report—Post Operating License Stage,'' which will update ''Applicant's Environmental Report—Operating License Stage,'' as appropriate, to reflect any new information or significant environmental change associated with the applicant's proposed decommissioning activities or with the applicant's proposed activities with respect to the planned storage of spent fuel. As stated in § 51.23, no discussion of the environmental impacts of the continued storage of spent fuel is required in this report. The '''Supplement to Applicant's Environmental Report—Post Operating License Stage''' may incorporate by reference any information contained in '''Applicants Environmental Report—Construction Permit Stage.''

■ 6. Revise § 51.61 to read as follows:

§ 51.61 Environmental report—independent spent fuel storage installation (ISFSI) or monitored retrievable storage installation (MRS) license.

Each applicant for issuance of a license for storage of spent fuel in an independent spent fuel storage installation (ISFSI) or for the storage of spent fuel and high-level radioactive waste in a monitored retrievable storage installation (MRS) pursuant to part 72 of this chapter shall submit with its application to: ATTN: Document Control Desk, Director, Office of Nuclear Material Safety and Safeguards, a separate document entitled ''Applicant's Environmental Report—ISFSI License'' or ''Applicant's Environmental Report—MRS License,'' as appropriate. If the applicant is the U.S. Department of Energy, the environmental report may be in the form of either an environmental impact statement or an environmental assessment, as appropriate. The environmental report shall contain the information specified in § 51.45 and shall address the siting evaluation factors contained in subpart E of part 72 of this chapter. As stated in § 51.23, no discussion of the environmental impacts of the continued storage of spent fuel in an ISFSI is required in this report.

■ 7. In § 51.75, revise paragraphs (a), (b), and (c) introductory text to read as follows:

§ 51.75 Draft environmental impact statement—construction permit, early site permit, or combined license.

(a) *Construction permit stage.* A draft environmental impact statement relating to issuance of a construction permit for a production or utilization facility will be prepared in accordance with the procedures and measures described in §§ 51.70, 51.71, 51.72, and 51.73. The contribution of the environmental effects of the uranium fuel cycle activities specified in § 51.51 shall be evaluated on the basis of impact values set forth in Table S–3, Table of Uranium Fuel Cycle Environmental Data, which shall be set out in the draft environmental impact statement. With the exception of radon-222 and technetium-99 releases, no further discussion of fuel cycle release values and other numerical data that appear explicitly in the table shall be required.[5] The impact statement shall take account of dose commitments and health effects from fuel cycle effluents set forth in Table S–3 and shall in addition take account of economic, socioeconomic, and possible cumulative impacts and other fuel cycle impacts as may reasonably appear significant. As stated in § 51.23, the generic impact determinations regarding the continued storage of spent fuel in NUREG–2157 shall be deemed incorporated into the environmental impact statement.

(b) *Early site permit stage.* A draft environmental impact statement relating to issuance of an early site permit for a production or utilization facility will be prepared in accordance with the procedures and measures described in §§ 51.70, 51.71, 51.72, 51.73, and this section. The contribution of the environmental effects of the uranium fuel cycle activities specified in § 51.51 shall be evaluated on the basis of impact values set forth in Table S–3, Table of Uranium Fuel Cycle Environmental Data, which shall be set out in the draft environmental impact statement. With the exception of radon-222 and technetium-99 releases, no further discussion of fuel cycle release values and other numerical data that appear explicitly in the table shall be required.[5] The impact statement shall take account of dose commitments and health effects from fuel cycle effluents set forth in Table S–3 and shall in addition take account of economic, socioeconomic, and possible cumulative impacts and other fuel cycle impacts as may reasonably appear significant. As stated in § 51.23, the generic impact determinations regarding the continued storage of spent fuel in NUREG–2157 shall be deemed incorporated into the environmental impact statement. The draft environmental impact statement must include an evaluation of alternative sites to determine whether there is any obviously superior alternative to the site proposed. The draft environmental impact statement must also include an evaluation of the environmental effects of construction and operation of a reactor, or reactors, which have design characteristics that fall within the site characteristics and design parameters for the early site permit application, but only to the extent addressed in the early site permit environmental report or otherwise necessary to determine whether there is any obviously superior alternative to the site proposed. The draft environmental impact statement must not include an

[5] Values for releases of Rn-222 and Tc-99 are not given in the table. The amount and significance of Rn-222 releases from the fuel cycle and Tc-99 releases from waste management or reprocessing activities shall be considered in the draft environmental impact statement and may be the subject of litigation in individual licensing proceedings.

assessment of the economic, technical, or other benefits (for example, need for power) and costs of the proposed action or an evaluation of alternative energy sources, unless these matters are addressed in the early site permit environmental report.

(c) *Combined license stage.* A draft environmental impact statement relating to issuance of a combined license that does not reference an early site permit will be prepared in accordance with the procedures and measures described in §§ 51.70, 51.71, 51.72, and 51.73. The contribution of the environmental effects of the uranium fuel cycle activities specified in § 51.51 shall be evaluated on the basis of impact values set forth in Table S–3, Table of Uranium Fuel Cycle Environmental Data, which shall be set out in the draft environmental impact statement. With the exception of radon-222 and technetium-99 releases, no further discussion of fuel cycle release values and other numerical data that appear explicitly in the table shall be required.[5] The impact statement shall take account of dose commitments and health effects from fuel cycle effluents set forth in Table S–3 and shall in addition take account of economic, socioeconomic, and possible cumulative impacts and other fuel cycle impacts as may reasonably appear significant. As stated in § 51.23, the generic impact determinations regarding the continued storage of spent fuel in NUREG–2157 shall be deemed incorporated into the environmental impact statement.

* * * * *

■ 8. In § 51.80, revise paragraph (b)(1) to read as follows:

§ 51.80 Draft environmental impact statement—materials license.

* * * * *

(b)(1) *Independent spent fuel storage installation (ISFSI).* As stated in § 51.23, the generic impact determinations regarding the continued storage of spent fuel in NUREG–2157 shall be deemed incorporated in the environmental impact statement.

* * * * *

■ 9. In § 51.95, revise paragraphs (b), (c)(2), and (d) to read as follows:

§ 51.95 Postconstruction environmental impact statements.

* * * * *

(b) *Initial operating license stage.* In connection with the issuance of an operating license for a production or utilization facility, the NRC staff will prepare a supplement to the final environmental impact statement on the construction permit for that facility, which will update the prior environmental review. The supplement will only cover matters that differ from the final environmental impact statement or that reflect significant new information concerning matters discussed in the final environmental impact statement. Unless otherwise determined by the Commission, a supplement on the operation of a nuclear power plant will not include a discussion of need for power, or of alternative energy sources, or of alternative sites, and will only be prepared in connection with the first licensing action authorizing full-power operation. As stated in § 51.23, the generic impact determinations regarding the continued storage of spent fuel in NUREG–2157 shall be deemed incorporated into the environmental impact statement.

(c) * * *

(2) The supplemental environmental impact statement for license renewal is not required to include discussion of need for power or the economic costs and economic benefits of the proposed action or of alternatives to the proposed action except insofar as such benefits and costs are either essential for a determination regarding the inclusion of an alternative in the range of alternatives considered or relevant to mitigation. In addition, the supplemental environmental impact statement prepared at the license renewal stage need not discuss other issues not related to the environmental effects of the proposed action and the alternatives. The analysis of alternatives in the supplemental environmental impact statement should be limited to the environmental impacts of such alternatives and should otherwise be prepared in accordance with § 51.71 and appendix A to subpart A of this part. As stated in § 51.23, the generic impact determinations regarding the continued storage of spent fuel in NUREG–2157 shall be deemed incorporated into the supplemental environmental impact statement.

* * * * *

(d) *Postoperating license stage.* In connection with the amendment of an operating or combined license authorizing decommissioning activities at a production or utilization facility covered by § 51.20, either for unrestricted use or based on continuing use restrictions applicable to the site, or with the issuance, amendment or renewal of a license to store spent fuel at a nuclear power reactor after expiration of the operating or combined license for the nuclear power reactor, the NRC staff will prepare a supplemental environmental impact statement for the post operating or post combined license stage or an environmental assessment, as appropriate, which will update the prior environmental documentation prepared by the NRC for compliance with NEPA under the provisions of this part. The supplement or assessment may incorporate by reference any information contained in the final environmental impact statement—for the operating or combined license stage, as appropriate, or in the records of decision prepared in connection with the early site permit, construction permit, operating license, or combined license for that facility. The supplement will include a request for comments as provided in § 51.73. As stated in § 51.23, the generic impact determinations regarding the continued storage of spent fuel in NUREG–2157 shall be deemed incorporated into the supplemental environmental impact statement or shall be considered in the environmental assessment, if the impacts of continued storage of spent fuel are applicable to the proposed action.

■ 10. In § 51.97, revise paragraph (a) to read as follows:

§ 51.97 Final environmental impact statement—materials license.

(a) *Independent spent fuel storage installation (ISFSI).* As stated in § 51.23, the generic impact determinations regarding the continued storage of spent fuel in NUREG–2157 shall be deemed incorporated into the environmental impact statement.

* * * * *

■ 11. In appendix B to subpart A of part 51, footnote 7 is removed from Table B–1 and the entries for ''Onsite storage of spent nuclear fuel'' and ''Offsite radiological impacts of spent nuclear fuel and high-level waste disposal'' under the ''Waste Management'' section of the table are revised to read as follows:

Appendix B to Subpart A—Environmental Effect of Renewing the Operating License of a Nuclear Power Plant

* * * * *

TABLE B–1—SUMMARY OF FINDINGS ON NEPA ISSUES FOR LICENSE RENEWAL OF NUCLEAR POWER PLANTS [1]

Issue	Category [2]	Finding [3]
*	*	* * * * * *
Waste Management		
*	*	* * * * * *
Onsite storage of spent nuclear fuel.	1	During the license renewal term, SMALL. The expected increase in the volume of spent nuclear fuel from an additional 20 years of operation can be safely accommodated onsite during the license renewal term with small environmental impacts through dry or pool storage at all plants. For the period after the licensed life for reactor operations, the impacts of onsite storage of spent nuclear fuel during the continued storage period are discussed in NUREG–2157 and as stated in § 51.23(b), shall be deemed incorporated into this issue.
Offsite radiological impacts of spent nuclear fuel and high-level waste disposal.	1	For the high-level waste and spent-fuel disposal component of the fuel cycle, the EPA established a dose limit of 0.15 mSv (15 millirem) per year for the first 10,000 years and 1.0 mSv (100 millirem) per year between 10,000 years and 1 million years for offsite releases of radionuclides at the proposed repository at Yucca Mountain, Nevada. The Commission concludes that the impacts would not be sufficiently large to require the NEPA conclusion, for any plant, that the option of extended operation under 10 CFR part 54 should be eliminated. Accordingly, while the Commission has not assigned a single level of significance for the impacts of spent fuel and high level waste disposal, this issue is considered Category 1.
*	*	* * * * * *

[1] Data supporting this table are contained in NUREG–1437, Revision 1, ''Generic Environmental Impact Statement for License Renewal of Nuclear Plants'' (June 2013).

[2] The numerical entries in this column are based on the following category definitions:

Category 1: For the issue, the analysis reported in the Generic Environmental Impact Statement has shown:

(1) The environmental impacts associated with the issue have been determined to apply either to all plants or, for some issues, to plants having a specific type of cooling system or other specified plant or site characteristic;

(2) A single significance level (i.e., small, moderate, or large) has been assigned to the impacts (except for Offsite radiological impacts—collective impacts from other than the disposal of spent fuel and high-level waste); and

(3) Mitigation of adverse impacts associated with the issue has been considered in the analysis, and it has been determined that additional plant-specific mitigation measures are not likely to be sufficiently beneficial to warrant implementation.

The generic analysis of the issue may be adopted in each plant-specific review.

Category 2: For the issue, the analysis reported in the Generic Environmental Impact Statement has shown that one or more of the criteria of Category 1 cannot be met, and therefore additional plant-specific review is required.

[3] The impact findings in this column are based on the definitions of three significance levels. Unless the significance level is identified as beneficial, the impact is adverse, or in the case of ''small,'' may be negligible. The definitions of significance follow:

SMALL—For the issue, environmental effects are not detectable or are so minor that they will neither destabilize nor noticeably alter any important attribute of the resource. For the purposes of assessing radiological impacts, the Commission has concluded that those impacts that do not exceed permissible levels in the Commission's regulations are considered small as the term is used in this table.

MODERATE—For the issue, environmental effects are sufficient to alter noticeably, but not to destabilize, important attributes of the resource.

LARGE—For the issue, environmental effects are clearly noticeable and are sufficient to destabilize important attributes of the resource.

For issues where probability is a key consideration (i.e., accident consequences), probability was a factor in determining significance.

* * * * *

Dated at Rockville, Maryland, this 11th day of September, 2014.

For the Nuclear Regulatory Commission.

Annette L. Vietti-Cook,

Secretary of the Commission.

[FR Doc. 2014–22215 Filed 9–18–14; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

10 CFR Part 51

[NRC–2012–0246]

RIN 3150–AJ20

Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel

AGENCY: Nuclear Regulatory Commission.

ACTION: Generic environmental impact statement.

SUMMARY: Notice is hereby given that the U.S. Nuclear Regulatory Commission (NRC) has published the final generic environmental impact statement (GEIS), NUREG–2157, ''Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel.'' NUREG–2157 addresses the environmental impacts of continued storage of spent nuclear fuel beyond the licensed life for operations of a reactor and provides a regulatory basis for the NRC's final rule on the environmental impacts of continued storage of spent nuclear fuel beyond the licensed life for operations of a reactor.

DATES: The generic environmental impact statement is available September 19, 2014.

ADDRESSES: Please refer to Docket ID NRC–2012–0246 when contacting the NRC about the availability of information regarding this document. You may access publicly-available information related to this action by the following methods:

TABLE B–1—SUMMARY OF FINDINGS ON NEPA ISSUES FOR LICENSE RENEWAL OF NUCLEAR POWER PLANTS [1]

Issue	Category [2]	Finding [3]
*	*	* * * * * *
Waste Management		
*	*	* * * * * *
Onsite storage of spent nuclear fuel.	1	During the license renewal term, SMALL. The expected increase in the volume of spent nuclear fuel from an additional 20 years of operation can be safely accommodated onsite during the license renewal term with small environmental impacts through dry or pool storage at all plants. For the period after the licensed life for reactor operations, the impacts of onsite storage of spent nuclear fuel during the continued storage period are discussed in NUREG–2157 and as stated in § 51.23(b), shall be deemed incorporated into this issue.
Offsite radiological impacts of spent nuclear fuel and high-level waste disposal.	1	For the high-level waste and spent-fuel disposal component of the fuel cycle, the EPA established a dose limit of 0.15 mSv (15 millirem) per year for the first 10,000 years and 1.0 mSv (100 millirem) per year between 10,000 years and 1 million years for offsite releases of radionuclides at the proposed repository at Yucca Mountain, Nevada. The Commission concludes that the impacts would not be sufficiently large to require the NEPA conclusion, for any plant, that the option of extended operation under 10 CFR part 54 should be eliminated. Accordingly, while the Commission has not assigned a single level of significance for the impacts of spent fuel and high level waste disposal, this issue is considered Category 1.
*	*	* * * * * *

[1] Data supporting this table are contained in NUREG–1437, Revision 1, ''Generic Environmental Impact Statement for License Renewal of Nuclear Plants'' (June 2013).

[2] The numerical entries in this column are based on the following category definitions:

Category 1: For the issue, the analysis reported in the Generic Environmental Impact Statement has shown:

(1) The environmental impacts associated with the issue have been determined to apply either to all plants or, for some issues, to plants having a specific type of cooling system or other specified plant or site characteristic;

(2) A single significance level (i.e., small, moderate, or large) has been assigned to the impacts (except for Offsite radiological impacts—collective impacts from other than the disposal of spent fuel and high-level waste); and

(3) Mitigation of adverse impacts associated with the issue has been considered in the analysis, and it has been determined that additional plant-specific mitigation measures are not likely to be sufficiently beneficial to warrant implementation.

The generic analysis of the issue may be adopted in each plant-specific review.

Category 2: For the issue, the analysis reported in the Generic Environmental Impact Statement has shown that one or more of the criteria of Category 1 cannot be met, and therefore additional plant-specific review is required.

[3] The impact findings in this column are based on the definitions of three significance levels. Unless the significance level is identified as beneficial, the impact is adverse, or in the case of ''small,'' may be negligible. The definitions of significance follow:

SMALL—For the issue, environmental effects are not detectable or are so minor that they will neither destabilize nor noticeably alter any important attribute of the resource. For the purposes of assessing radiological impacts, the Commission has concluded that those impacts that do not exceed permissible levels in the Commission's regulations are considered small as the term is used in this table.

MODERATE—For the issue, environmental effects are sufficient to alter noticeably, but not to destabilize, important attributes of the resource.

LARGE—For the issue, environmental effects are clearly noticeable and are sufficient to destabilize important attributes of the resource.

For issues where probability is a key consideration (i.e., accident consequences), probability was a factor in determining significance.

* * * * *

Dated at Rockville, Maryland, this 11th day of September, 2014.

For the Nuclear Regulatory Commission.

Annette L. Vietti-Cook,

Secretary of the Commission.

[FR Doc. 2014–22215 Filed 9–18–14; 8:45 am]

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NUCLEAR REGULATORY COMMISSION

10 CFR Part 51

[NRC–2012–0246]

RIN 3150–AJ20

Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel

AGENCY: Nuclear Regulatory Commission.

ACTION: Generic environmental impact statement.

SUMMARY: Notice is hereby given that the U.S. Nuclear Regulatory Commission (NRC) has published the final generic environmental impact statement (GEIS), NUREG–2157, ''Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel.'' NUREG–2157 addresses the environmental impacts of continued storage of spent nuclear fuel beyond the licensed life for operations of a reactor and provides a regulatory basis for the NRC's final rule on the environmental impacts of continued storage of spent nuclear fuel beyond the licensed life for operations of a reactor.

DATES: The generic environmental impact statement is available September 19, 2014.

ADDRESSES: Please refer to Docket ID NRC–2012–0246 when contacting the NRC about the availability of information regarding this document. You may access publicly-available information related to this action by the following methods:

• *Federal Rulemaking Web site:* Go to *http://www.regulations.gov* and search for Docket ID NRC–2012–0246. Address questions about NRC dockets to Carol Gallagher; telephone: 301–287–3422; email: *Carol.Gallagher@nrc.gov*. For technical questions, contact the individual listed in the **FOR FURTHER INFORMATION CONTACT** section of this document.

• *NRC's Agencywide Documents Access and Management System (ADAMS):* You may access publicly available documents online in the ADAMS Public Documents collection at *http://www.nrc.gov/reading-rm/adams.html*. To begin the search, select ''*ADAMS Public Documents*'' and then select ''*Begin Web-based ADAMS Search*.'' For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1–800–397–4209, 301–415–4737, or by email to *pdr.resource@nrc.gov*. The ADAMS accession number for each document referenced in this document (if that document is available in ADAMS) is provided the first time that a document is referenced. The two volumes of the final GEIS are available electronically in ADAMS under Accession Nos. ML14196A105 and ML14196A107.

• *NRC's PDR:* You may examine and purchase copies of public documents at the NRC's PDR, Room O1–F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

In addition, the final GEIS may be accessed online at the NRC's Web page at: *http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/*.

FOR FURTHER INFORMATION CONTACT: Sarah Lopas, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; telephone: 301–287–0675, email: *Sarah.Lopas@nrc.gov*.

SUPPLEMENTARY INFORMATION: In response to a ruling by the Court of Appeals for the District of Columbia Circuit (*New York* v. *NRC,* 681 F.3d 471) that vacated the NRC's former Waste Confidence rule (§ 51.23 of Title 10 of the *Code of Federal Regulations* (10 CFR)), the NRC developed a revised rule supported by a GEIS. NUREG–2157, ''Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel'' provides a regulatory basis for the final rule and generically determines the environmental impacts of continued storage of spent fuel beyond the licensed life for operation of a reactor (continued storage). Concurrently with this document, the NRC is publishing the final rule, ''Continued Storage of Spent Nuclear Fuel'' (RIN 3150–AJ20; NRC–2012–0246), in the Rules section of this issue of the **Federal Register**. The final rule codifies the results of the analyses in NUREG–2157 in 10 CFR 51.23 and makes other conforming changes to 10 CFR part 51.

The NRC prepared the GEIS to satisfy its National Environmental Policy Act obligations regarding the environmental impacts of continued storage. A notice of intent to prepare a draft environmental impact statement and conduct scoping was published in the **Federal Register** on October 25, 2012 (77 FR 65137). The draft GEIS notice of availability and public meetings, and request for comment, was published on September 13, 2013 (78 FR 56621). Additional draft GEIS public meeting notices were published on September 19, 2013 (78 FR 57538); October 29, 2013 (78 FR 64412; 78 FR 64413); and November 4, 2013 (78 FR 65903). An extension to the comment period was published on November 7, 2013 (78 FR 66858). The purpose of this notice is to inform the public that the final GEIS is available for public inspection.

Dated at Rockville, Maryland, this 10th day of September, 2014.

For the Nuclear Regulatory Commission.

Paul Michalak,

Acting Director, Waste Confidence Directorate, Office of Nuclear Material Safety and Safeguards.

[FR Doc. 2014–22250 Filed 9–18–14; 8:45 am]

BILLING CODE 7590–01–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2014–0144; Directorate Identifier 2013–NM–232–AD; Amendment 39–17970; AD 2014–19–02]

RIN 2120–AA64

Airworthiness Directives; Bombardier, Inc. Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain Bombardier, Inc. Model DHC–8–400, –401, and –402 airplanes. This AD was prompted by reports of rudder bearings falling out of the fore rudder hinge bracket during assembly. This AD requires a proof load test and detailed inspections; and installation of a new bearing, reaming, or repair of the bearing if necessary. We are issuing this AD to detect and correct improper bearing installation, which could result in abnormal wear and potential increased freeplay in the rudder system, and resultant airframe vibration, leading to compromise of the flutter margins of the airplane.

DATES: This AD becomes effective October 24, 2014.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of October 24, 2014.

ADDRESSES: You may examine the AD docket on the Internet at *http://www.regulations.gov/#!docketDetail;D=FAA-2014-0144* or in person at the Docket Management Facility, U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC.

For service information identified in this AD, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416–375–4000; fax 416–375–4539; email *thd.qseries@aero.bombardier.com;* Internet *http://www.bombardier.com.* You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425–227–1221.

FOR FURTHER INFORMATION CONTACT: Ricardo Garcia, Aerospace Engineer, Airframe and Mechanical Systems Branch, ANE–171, FAA, New York Aircraft Certification Office (ACO), 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516–228–7331; fax 516–794–5531.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Bombardier Model DHC–8–400, –401, and –402 airplanes. The NPRM published in the **Federal Register** on March 25, 2014 (79 FR 16245).

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF–2013–34, dated November 1, 2013 (referred to after this as the Mandatory Continuing Airworthiness Information, or ''the MCAI''), to correct an unsafe condition for certain Bombardier Model DHC–8–400, –401, and –402 airplanes. The MCAI states: